

# Army Lodging Wellness Recommendation

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## Final Submittal - White Sands Arsenal

February 13, 2004

**3D/I**

# White Sands Missile Range

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Table of Contents	Section 1 – Wellness Recommendation	1-1
	Introduction	1-1
	Methodology	1-1
	Demand Summary	1-2
	Lodging Summary	1-2
	Cost Summary	1-4
	Recommendation / Conclusion	1-5
	Section 2 – Lodging Master Plan	2-1
	Installation Summary	2-1
	Master Plan Summary	2-1
	Existing Lodging Summary	2-2
	New Lodging Building	2-7
	Section 3 – Demand Analysis	3-1
	Overview	3-1
	On Post Inventory	3-1
	Demand and Utilization	3-2
	Private Market Capability	3-4
	Demand Requirement Determination	3-5
	Summary and Recommendations	3-7
	Section 4 – Facility Assessment / Plans	4-1
	Appendix	A
Areas and Occupancy Matrix	A-1	

## Introduction

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# Section 1 Wellness Recommendation

The Army Lodging Wellness Program is conducted under the direction and guidance of Headquarters Army, Lodging Division (CFSC). The goal of the White Sands Missile Range Lodging Wellness Plan is to provide a comprehensive assessment and planning tool to support long term capitalization of Army Lodging facilities. The Demand Analysis determines installation Lodging requirements, and reviews off-post Lodging availability and cost, arriving at the most economical solution for meeting total transient requirements and providing a final determination of the appropriate number and configuration of on-post Lodging rooms. Individual Lodging facility condition (building and building systems) and functional assessments are included with both recommendations and costs. Facility improvement and renovation versus replacement/new construction recommendations are developed based on the individual facility assessments and cost. A Lodging Master Plan for the installation is developed including renovation, replacement/new construction, and proposed new facility siting. A final recommendation defines the method for achieving the final wellness solution for the installation and will assist with project planning.

## Methodology

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### ***Demand***

- Demand for Lodging facilities is analyzed and adjusted for atypical past occurrences and for expected changes in the installation's population, housing, or mission. Two primary methods are used to calculate the optimum number of rooms: the number necessary to meet 80% of official demand and the number projected to be the most efficient from an operating cost perspective.
- The off-post private market is assessed for capacity and representative rates. A determination is made if the private market has the capability to handle overflow requirements of official demand.
- Room mix recommendation is based on the segmentation of the Permanent Change of Station (PCS)/Temporary Duty (TDY) mix and the expected lengths of stay. This produces the final determination of the appropriate number and configuration of rooms for the installation.

### **Assessment**

- Existing Lodging facilities are assessed based on building and building system conditions followed by an assessment for conformance to the Army Lodging functional standards. Facilities assessed to be in fair to good condition, and meeting the majority of functional requirements, are considered for renovation. Renovation of Lodging facilities found in poor condition and configured significantly different than current standards will typically exceed 50% of the replacement costs and are recommended for replacement/new construction. This decision is supported by renovation cost comparisons as well as the assessment documentation.
- The age, condition, and existing configuration of most of the existing Lodging buildings support a finding of replacement through new construction in lieu of renovation.
- Force protection construction criteria has a significant impact on new construction. This Wellness recommendation, including building assessment, site analysis, and proposed Lodging construction, incorporates these requirements from the UFC 4-010-01, in our analysis and recommendations. Consistent with this guidance, force protection mitigation is not considered in renovation unless the renovation cost exceeds 50% of the replacement cost for a facility.

### **Demand Summary**

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Due to the lack of nearby off-post lodging, we recommend the results of the 100% of Official Annual Demand analysis, adjusted for the weekly demand pattern. Using this criterion, we expect an average occupancy of 43%, and 100% of the official demand is met.

### **Room Count and Mix Recommendation**

86 rooms

Proposed room mix:

- 49 standard guest rooms;
- 34 extended-stay guest rooms offering a kitchenette;
- 3 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette.

The demand analysis has determined a need of 86 rooms; however, based on existing and proposed building configurations, the actual number recommended for the White Sands Missile Range Wellness Plan will be 88 rooms.

## Lodging Summary

The following Lodging for White Sands is summarized by building, including number of existing rooms and number of proposed rooms determined as part of the installation Wellness recommendation. The table also indicates the number of rooms required for a new Lodging facility based on buildings not proposed for re-use due to poor existing conditions and high renovation costs. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. Proposed additional long term changes during a future phase of the Wellness Plan are also included.

Building Number	Existing Rooms					Wellness Recommendation (FY 08)			
	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf	Other Rooms	Total Rooms	Std Rms 300 sf	Extend. Stay Rms 300 sf	Family Suites 450 sf
<b>Wellness Recommendation based on Demand Analysis</b>									
						86	49	34	3
<b>Existing Lodging Facilities</b>									
501	24	22		2		0			
502	19			19		0			
504	3			3		0			
506	15		15			13		13	
12333	1				1	0			
12334	1				1	0			
12335	1				1	0			
12336	1				1	0			
12337	1				1	0			
12342	1				1	0			
12343	1				1	0			
12344	1				1	0			
12345	1				1	0			
12346	1				1	0			
12347	1				1	0			
12348	1				1	0			
<b>Totals</b>	<b>73</b>	<b>22</b>	<b>15</b>	<b>24</b>	<b>12</b>	<b>13</b>	<b>0</b>	<b>13</b>	<b>0</b>
<b>New Proposed Lodging Facility</b>									
						75	49	23	3
<b>Total Lodging Rooms</b>									
						88	49	36	3

### Summary of Room Count and Mix based on Configuration

- 88 rooms
  - 49 standard guest rooms;
  - 36 extended-stay guest rooms offering a kitchenette;
  - 3 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette.

## Cost Summary

### Project Cost

The following table summarizes the Condition Analysis, Renovation, and Replacement Cost by individual Lodging facilities. The Wellness Recommendation indicates cost by building based on recommendation, including the proposed facility cost.

Building Number	Existing Units						Wellness Recommendation (FY 08)			
	Total Rooms	Condition Analysis Cost*	Upgrade Renovation Cost**	Renovation Cost***	Replacement Cost	% Condition Analysis or Renovation Cost Ratio	Total Rooms	Total Cost	Condition Analysis / Upgrade Renovation Cost	New Construction Cost
<b>Existing Lodging Facilities</b>										
501	24	****		\$ 2,788,715	\$ 2,970,490	93.88%	0			
502	19	****		\$ 2,178,502	\$ 3,118,578	69.86%	0			
504	3	Building Being Removed From Inventory in 2004. No Condition Assessment Done.					0			
506	15	\$ 297,449	\$ 61,316		\$ 1,388,993	25.83%	13		\$ 358,765	
12333	1	****		\$ 228,124	\$ 301,457	75.67%	0			
12334	1	****		\$ 259,680	\$ 343,638	75.57%	0			
12335	1	****		\$ 216,700	\$ 281,201	77.06%	0			
12336	1	****		\$ 259,680	\$ 343,638	75.57%	0			
12337	1	****		\$ 216,700	\$ 281,201	77.06%	0			
12342	1	****		\$ 216,700	\$ 281,201	77.06%	0			
12343	1	****		\$ 228,124	\$ 301,457	75.67%	0			
12344	1	****		\$ 259,680	\$ 343,638	75.57%	0			
12345	1	****		\$ 216,700	\$ 281,201	77.06%	0			
12346	1	****		\$ 259,680	\$ 343,638	75.57%	0			
12347	1	****		\$ 228,124	\$ 301,457	75.67%	0			
12348	1	****		\$ 216,700	\$ 281,201	77.06%	0			
<b>Totals</b>	<b>0</b>	<b>\$ 297,449</b>		<b>\$ 7,773,809</b>	<b>\$ 11,162,989</b>		<b>13</b>	<b>\$ -</b>	<b>\$ 358,765</b>	
<b>New Proposed Lodging Facility</b>										
							75	\$ 9,064,471		\$ 9,064,471
<b>Total</b>										
							88	\$ 9,423,236	\$ 358,765	\$ 9,064,471

\* The Condition Analysis Cost is for making the building well based on Army Lodging Standards without changing how the building functions.

\*\* The Upgrade Renovation Cost includes Condition Assessment items and Upgrade Renovation Cost to meet Army Lodging Standards.

\*\*\* The Renovation Cost is for making the building well based on Army Lodging Standards including making functional changes.

\*\*\*\* If the Condition Analysis Cost is under 50% of the Replacement Cost, the Renovation Cost is used.

### Cost per Room Comparison

The Wellness Recommendation includes review of off-post Lodging costs compared to the proposed renovation and new construction costs on-post. The renovation and new construction costs include operating costs, capital assessment costs, and sustainment capital expenditures. The following table summarizes this comparison per room for FY08.

	Renovation	New Building	Total
Cost per Room at White Sands	\$ 58.93	\$ 71.65	\$ 69.77
Off Post Cost per Room	\$ 71.45	\$ 71.45	\$ 71.45
Difference between On-Post and Off-Post Lodging per room	\$ 12.52	\$ (0.19)	\$ 1.69
% Savings of On-Post to Off-Post Lodging	17.5%	-0.3%	2.4%

The Cost Per Room at White Sands is based on:

Renovation / New Construction Cost w/ inflation to FY 08

Three year Average Operating Cost w/ inflation to FY 08

Cap Ex Cost

Capital Assessment Cost to FY 08

Off Post Cost is based on current room rate average with inflation to FY 08

Due to this cost difference and the savings of 2.4%, it is our recommendation that the Army construct a new Lodging facility and retain1 existing facilities at White Sands Missile Range in lieu of using off-post lodging to support the determined demand requirement. Off-post lodging will continue to be used for demand beyond the on-post room requirement.

## Recommendations / Conclusions

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The Wellness Recommendation for White Sands Missile Range is to continue the use of building 506 with 13 rooms and to construct a new main Lodging facility to accommodate the public and back-of-the house spaces and 75 rooms, for a total of 88 rooms, to meet the 86 room requirement. The number of rooms for the new proposed Lodging facility reflects the proposed layout and does not match the exact demand numbers, because of building configuration. A long term recommendation (FY18) is to construct an addition to this new Lodging facility to replace the 13 existing rooms in Building 506. Existing Lodging facilities that do not meet condition and functional requirements based on cost shall be removed from the Lodging inventory. A synopsis of recommended building actions follows

- Retain building 506 for the next 15-20 years. Make condition assessment improvements and renovations to add support spaces required.
- Remove all other existing Lodging buildings from the Lodging inventory due to the condition of existing building systems and/or the cost to renovate to meet Army functional criteria.
- Construct a new Lodging facility to include 75 rooms. This building will be planned to include public and back-of-the-house Lodging functions for the total Lodging inventory. The Lodging Master plan

indicates a future addition to accommodate rooms from building 506 when replacement is required.

***Cost Summary***

The cost for this recommendation will be:

Renovation of building 506	\$ 358,765
New Lodging Facility	\$ 9,064,471
<b>Total</b>	<b>\$ 9,423,236</b>

The Cost for the future addition is estimated at \$1,151,449 in FY18, using inflation rates in accordance with the most recent version of the Economic Analysis for MILCON updated 2 December 2002 located at [www.hq.usace.army.mil/](http://www.hq.usace.army.mil/)

***Phasing***

Recommend the following phasing as funding is identified.

- Minimize investment in infrastructure for buildings 501, 502, 504, 12333 – 12337, 12342 - 12348.
- Renovate building 506.
- Construct new Lodging facility prior to removing existing Lodging facilities from inventory and removing back-of-the-house and public spaces from building 501 and 502.
- Remove buildings 501, 502, 504, 12333 – 12337, 12342 – 12348 from Lodging inventory.
- Construct addition to new Lodging facility to accommodate rooms from building 506, when replacement of building 506 is required (FY 18).



## Section 2

### Lodging

### Master Plan



## Installation Summary

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White Sands Missile Range, the largest military installation in the country, is a multi-service test range occupying 2,016,733 acres in the Tularosa Basin of south-central New Mexico. As a center for missile development and test programs for the Army, Navy, Air Force, National Aeronautics and Space Administration, government agencies and private industry, this installation is a key element in research and technology. This installation is historically significant with respect to facilities and the mission, noting development dating back to 1945.

The White Sands Missile Range Installation Guide, completed in 1991, incorporates specific installation requirements. Land use, future development, and architectural compatibility are integral components of the Guide. Current Lodging room night requirements, Army guidance on Lodging facility design standards, and force protection construction standards required additional analyses, and are incorporated into the recommendations of this Lodging Wellness Plan.

The character of White Sands Missile Range has been preserved and enhanced through the use of stucco and masonry. The existing architecture on the installation responds to the surrounding southwest context, evident in the inventory of single family housing units. Flat roof systems, simple building massing, and roof overhangs provide an aesthetic relief while serving as protection from the harsh climatic conditions.

## Master Plan Summary

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Lodging facilities at White Sands were constructed in various phases, and are located in several areas of the installation. A thorough condition and functional assessment of the existing buildings noted significant deficiencies. Renovation of a majority of these buildings to the new Lodging standards and building configuration design is not viable within the 50% threshold. The primary Lodging area is located in the center of the installation, in relative proximity to a majority of the community facilities. This site is not recommended for planning future Lodging construction, though, due to site constraints.

The proposed White Sands Missile Range Lodging Master Plan reflects 88 Lodging rooms with an initial replacement of a majority of the existing Lodging inventory in a new Lodging facility. This new facility, in conjunction with existing Lodging facility 506, will combine required rooms, public areas and service functions into a cohesive Lodging physical plant in support of the installation requirements.

Siting of the new 75 unit Lodging facility is recommended adjacent to the existing Frontier Club. This plan recommends retaining the guest rooms in building 506 for the next 15-20 years, based on current condition and configuration, and limiting renovation work in this building specifically to the addition of required support spaces. The Lodging Master Plan does include a long term addition to the new Lodging facility to replace these Lodging rooms when it is deemed that building 506 is beyond its useful life (FY18).

## Existing Lodging Summary

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### ***Building 00501***

Building 501, constructed in 1950, serves as the Main Lodging facility for the White Sands installation. This facility houses 22 standard stay rooms and 2 family suites as well as a portion of the public and back-of-house areas, including the front desk, lobby and administrative offices. There are additional departmental offices currently being housed in the west portion of the facility, including the Housing department. Although this building was renovated in 1998 and is in fair condition, it does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 501 to the new standards and configuration will exceed 50% of the replacement cost.

It should be noted that this structure may be historic and some Army Lodging functional requirements indicated in the report would require clearance from the SHPO or through Army Alternate Procedures; therefore, some of the requirements may need modification, in which case the prices for implementation may vary from the cost models applied.

Our recommendation is to remove building 501 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



#### ***Building 00502***

Building 502, constructed in 1952, is a 2-story structure housing 19 family suites. This facility was built as an addition to the original Main Lodging facility, building 501, and includes several back-of-the-house areas which serve both facilities. Although this building was renovated in 1998 and is in fair condition, it does not meet the demand requirements of only 3 family suites, and cannot be reconfigured to the standard/extended stay rooms without significant reconstruction. To renovate building 502 to the new configuration will exceed 50% of the replacement cost.

It should be noted that this structure may be historic and some Army Lodging functional requirements indicated in the report would require clearance from the SHPO or through Army Alternate Procedures; therefore, some of the requirements may vary from the cost models applied.

Our recommendation is to remove building 502 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



#### ***Building 00504***

Building 504, constructed in 1959, is a shared facility housing 3 family suites. These rooms do not meet Lodging standards and can not be reconfigured without significant reconstruction. Building 504 is scheduled to be removed from the Lodging inventory in FY04, and was not assessed.



#### ***Building 00506***

Building 506, constructed in 1986, houses 15 extended stay rooms. Although this building was renovated in 1996 and is in fair condition, many support spaces do not exist and the existing room size is slightly larger than standards. To renovate building 506 to include the appropriate support spaces and meet standards will not exceed 50% of the replacement cost.

The Wellness Recommendation is to retain building 506 in the White Sands Lodging inventory. This facility will remain in the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12333***

Building 12333, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12333 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12333 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12334***

Building 12334, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12334 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12334 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12335***

Building 12335, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12335 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12335 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.





### ***Building 12336***

Building 12336, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12336 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12336 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12337***

Building 12337, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12337 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12337 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12342***

Building 12342, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12342 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12342 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



#### ***Building 12343***

Building 12343, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12343 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12343 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



#### ***Building 12344***

Building 12344, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12344 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12344 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



#### ***Building 12345***

Building 12345, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12345 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12345 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12346***

Building 12346, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12346 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12346 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12347***

Building 12347, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12347 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12347 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.



### ***Building 12348***

Building 12348, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12348 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12348 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## **New Lodging Building**

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The proposed replacement/new Lodging facility includes 75 rooms; 3 family suites, 49 standard guest rooms, and 23 extended stay rooms. The plan includes a future expansion of a single story wing to replace the 13 rooms in building 506 in 15-20 years when replacement is required. The lobby and back-of-the-house spaces are sized for the 88 total Lodging rooms on the installation.

The proposed new construction will be sited at the west side of the existing Frontier Club, providing vistas to the existing Organ Mountains and proximity to the existing golf course. The lobby will be constructed of glass exterior curtain walls to enhance views to the adjacent mountain range, while providing maximum climatic protection through shading devices. The proposed building construction is steel frame with CMU infill walls, flat built-up roof, and a stucco exterior veneer. The architectural guidance for White Sands is very specific and is incorporated into the cost of the new facility.

The mass and scale of the proposed building is critical. Based on the number of required rooms and to limit the length of the wings, the recommendation of this plan is to provide varying roof levels to promote interest and character, while providing relief from the scale of the facility. The core area, which also includes the family suite functions and some standard stay functions, would maintain a 3-story height. The two wings supporting the standard guest rooms and extended stay rooms with a long-term addition to these wings that would taper from 3 story to 2 story to 1 story, providing a pedestrian scale.



## Areas and Occupancy

The following chart indicates all spaces and size for the proposed new construction based on program and the proposed conceptual building plan.

ROOM / SPACE	PROGRAMMED FLOOR AREA			PLAN FLOOR AREA
	No. Req'd	Net Area Per Room	Total Net Area	
<b>Total Area including 9% Add On Factor (does not include Outside Areas)*</b>			<b>49312</b>	<b>51224</b>
<b>Public Areas</b>			<b>15744</b>	<b>16733</b>
Exterior Entrance	N/A	N/A		0
Vestibule	1	1	0	0
Lobby (includes vestibule)	1	500-800	500-800	1123
Front Desk	2 station	100	100	125
Bell Cart Station	3	12	36	45
Breakfast Bar (Seat/Svc) - min.	1	550	550	778
Passenger Elevators	2	64	384	384
Stairs	4	230	2760	2529
Public Corridors	0	0	9800	9262
Public Telephone Area	2	6	12	70
Vending - Full Service	2	70	140	250
Vending - Ice Only	1	30	30	204
Women - Lobby	1	200	200	235
Men - Lobby	1	200	200	235
Multi-Purpose Room - (250 s.f. min.)	1	250	250	279
Study Rooms (1 per 25 ext stay units)	1	250	250	527
Guest Laundries (2 sets w/d per 75 units)	1	192	192	531
Gear Wash Rooms - (170 s.f. min.)	0	170	0	0
Guest Bulk Storage (1 per 4 family suites)	1	25 ea. 40 w/circ.	40	156
<b>Guest Rooms</b>	<b>75</b>		<b>22950</b>	<b>22950</b>
Guest Room - Standard	49	300	14700	14700
Guest Room - Ext. Stay	23	300	6900	6900
Guest Room - Family Suites	3	450	1350	1350
<b>Back-of-House Areas</b>			<b>6546</b>	<b>7974</b>
Manager's Office	1	180	180	182
Assistant Manager Offices	1	120	120	120
Front Office Manager	1	100	100	101
Admin. Offices	2 staff	200-250	200-250	341
Cash Room	1	75	75	75
Luggage Storage	1	75	75	76
Admin. Conference Room	1	250	250	279
Housekeeping Office	1	120	120	122
Dirty/Clean Linen Storage	0	50	0	0
In-House Laundry - (500 s.f. minimum)	1	500	500	501
Receiving Office	1	75	75	80
Maintenance Area	1	175	175	111
Kitchen Prep Room	1	150	150	150
Break Room	1	210	210	218
Staff Toilet - Men	1	100	100	98
Staff Toilet - Women	1	100	100	98
Access Corridor	0	0	900	913
Receiving -min.	1	150	150	175
Housekeeping Rooms	1 per 15 units	128	640	943
Service Elevator	1	80	240	252
Data/Commo Room	1	100	100	102
Switch Closets	2	16	32	156
Janitor Closet	1	50	50	67
Mechanical Room	0	0	450	640
General Storage Room - (500 s.f. min.)	1	500	500	796
Bulk Storage Room - (500 s.f. min.)	1	500	500	763
Electrical Room	3	140	420	531
Elevator Equipment Room	1	84	84	84
<b>Exterior</b>			<b>400</b>	
Playground (Outdoor)	1	0	0	0
Grounds Maintenance	1	400	400	0
* Add on factor to cover s.f. for partitions and any space not included in numbers above.				

## Cost Summary

The New Construction Cost: \$9,064,471

- The cost is for a building of 87 rooms.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

### Summary of Project Replacement Cost (based on 51,224 s.f.)

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.92%</b>	<b>\$178,981.75</b>
Parking Lots		\$63,080.00
Site Earthwork		\$115,901.75
<b>03 Concrete</b>	<b>19.96%</b>	<b>\$1,221,838.86</b>
Floor Construction		\$834,558.86
Slab on Grade		\$85,795.00
Stair Construction		\$44,100.00
Standard Foundations		\$257,385.00
<b>04 Masonry</b>	<b>4.53%</b>	<b>\$277,060.88</b>
Exterior Walls		\$277,060.88
<b>07 Thermal &amp; Moisture Protection</b>	<b>5.72%</b>	<b>\$350,374.11</b>
Roof Construction		\$139,530.73
Roof Coverings		\$210,843.38
<b>08 Doors &amp; Windows</b>	<b>7.38%</b>	<b>\$451,745.00</b>
Exterior Doors		\$17,831.00
Exterior Windows		\$340,000.00
Interior Doors		\$93,914.00
<b>09 Finishes</b>	<b>18.80%</b>	<b>\$1,150,964.16</b>
Ceiling Finishes		\$368,730.16
Floor Finishes		\$390,249.49
Partitions		\$226,866.39
Wall Finishes		\$165,118.12
<b>11 Equipment</b>	<b>1.76%</b>	<b>\$108,034.50</b>
Commercial Equipment		\$15,125.00
Other Equipment		\$92,909.50
<b>13 Special Construction</b>	<b>5.06%</b>	<b>\$309,891.54</b>
Communications & Security		\$139,502.67

Sprinklers		\$170,388.87
<b>14 Conveying Systems</b>	<b>3.51%</b>	<b>\$214,800.00</b>
Elevators and Lifts		\$214,800.00
<b>15 Mechanical</b>	<b>16.92%</b>	<b>\$1,036,152.00</b>
Cooling Generating Systems		\$411,816.00
Domestic Water Dist		\$141,300.00
Plumbing Fixtures		\$483,036.00
<b>16 Electrical</b>	<b>7.31%</b>	<b>\$447,689.50</b>
Electrical Service & Distribution		\$445,494.50
Site Lighting		\$2,195.00
<b>19 FF&amp;E</b>	<b>6.12%</b>	<b>\$375,000.00</b>
Interior FF&E allowance		\$375,000.00
Total Raw Cost	100.00%	\$6,122,532.30

**Additional Hard Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Spirit	0.50%	\$33,673.93
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$612,253.23
<b>Total Additional Hard Cost</b>		<b>\$645,927.16</b>

**Soft Cost (Template: Army Lodging New Construction)**

Parameter Name	Percent	Amount
Contingency	5.00%	\$338,422.97
SIOH Conus	6.50%	\$461,947.36
Design	10.00%	\$676,845.95
08 MYr Inflation Fct	9.93%	\$818,795.60
<b>Total Soft Cost</b>		<b>\$2,296,011.88</b>
<b>Total Project Cost for Replacement</b>		<b>\$9,064,471.34</b>

**INSERT PROPOSED CAMPUS AREA ANALYSIS DRAWING HERE**

**INSERT LODGING MASTER PLAN DRAWING HERE**

**INSERT PROPOSED LODGING FACILITY DRAWINGS (FLRS. 1-3) HERE**

## Section 3 Demand Analysis

### Overview

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White Sands Missile Range, New Mexico, is a multi-service installation supporting missile development and test programs for the Army, Navy, Air Force, other governmental agencies and private industry. The installation houses six different units. Major tenants include the United States Naval Air Warfare Center Weapons Division (NAWC), the Battlefield Environment Directorate (BED), and the National Aeronautics and Space Administration (NASA).

The population at White Sands Missile Range decreased modestly over the past several years, from 6,396 in FY98 to 6,058 in FY02. U.S. Department of Defense personnel decreased while other populations increased slightly. The installation expects the total population to reach 6,068 by FY05.

In FY02, White Sands Missile Range lodging demand comprised 97% Temporary Duty (TDY) personnel and 3% Permanent Change of Station (PCS). White Sands Missile Range is in a location and operates in a manner that does not generate any unofficial demand. Therefore, demand that may be otherwise categorized as unofficial was classified as TDY in our analysis of this installation.

The table below describes White Sands Missile Range official demand population.

White Sands Missile Range Official Market Demand Analysis		
	TDY	PCS
<b>Total Demand:</b>	97%	3%
<b>Market Segmentation:</b>		
Individuals	100%	< 10%
Families	0%	> 90%
<b>Average Length of Stay (Days):</b>		
14 days or less	53% (2 days)	5% (7 days)
More than 14 days	37% (15 days)	95% (25 days)

*Source: White Sands Missile Range Lodging Administration, compiled by HVS International*

### On Post Inventory

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White Sands Missile Range has 102 rooms in its lodging inventory.

## Demand and Utilization

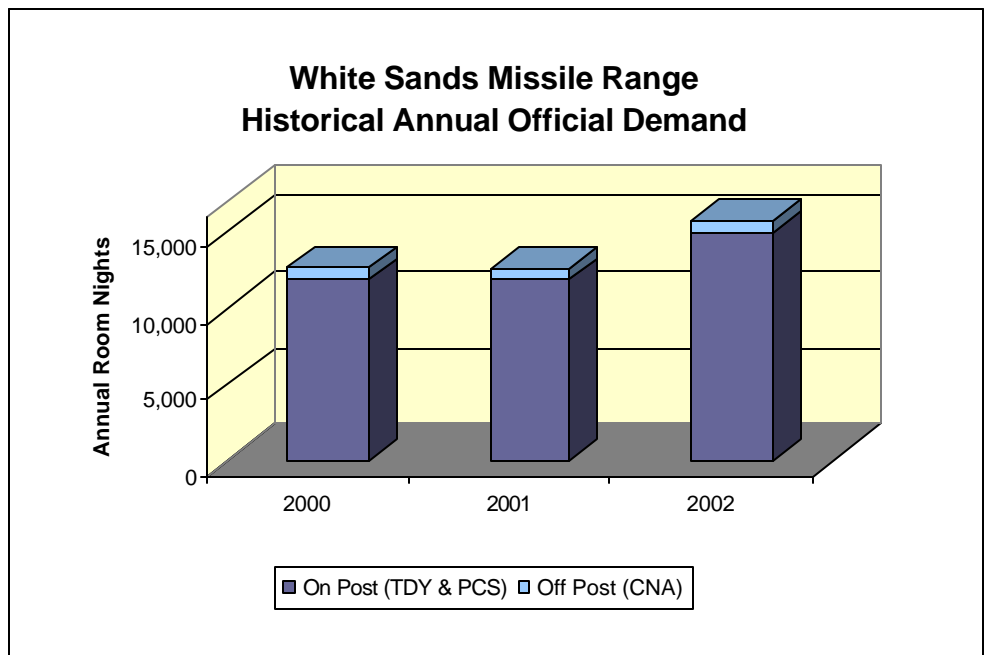
### **Data Summary**

Official demand, including Certificates of Non-Availability (CNAs), totaled 15,741 room nights in FY02, up from 12,607 in FY01 and 12,630 in FY00. In FY02, official demand averaged 43 room nights per day. As noted previously, this demand represents all Lodging users; there is no demand that is considered unofficial.

PCS demand represented only a minimal part of official demand at this installation, increasing from 376 total room nights in FY01 to 511 total room nights in FY02.

Lodging issued slightly more CNAs in FY02 (829 room nights) than in FY01 (747 room nights). The need for CNAs with such a low official demand was due to the timing of concurrent five-day testing sessions in which personnel checked in Sunday nights and checked out Friday mornings. Accordingly, limited demand utilization on Friday and Saturday nights reduced the overall occupancy level.

The following chart summarizes White Sands Missile Range historical data; it identifies the annual official demand both on and off post.



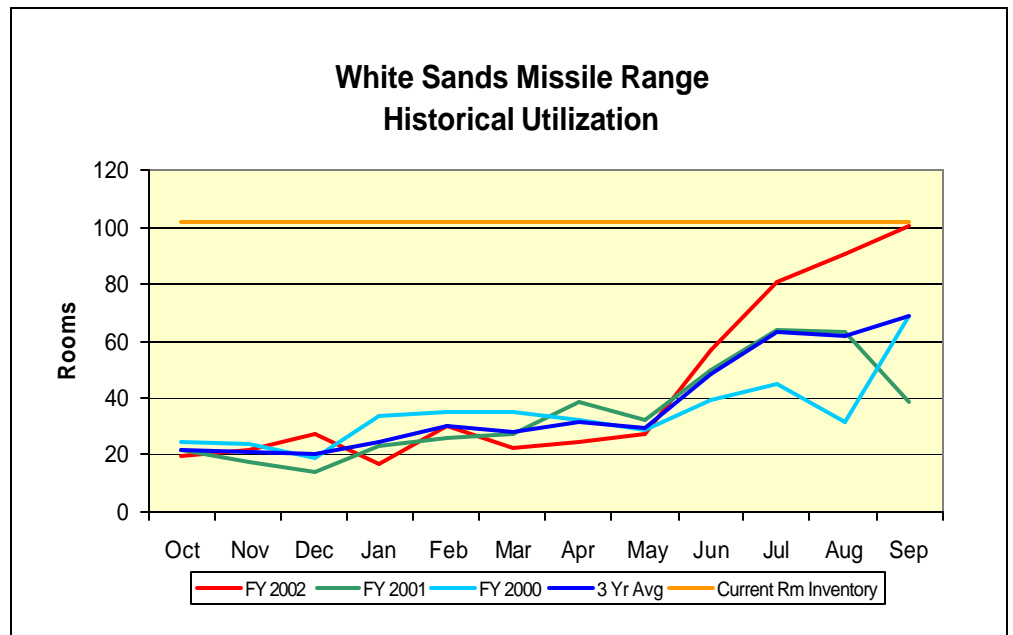
Source: White Sands Missile Range Lodging Administration, compiled by HVS International

Lodging occupancy at White Sands Missile Range was 44.4% in FY00, 44.5% in FY01, and 49.4% in FY02. Because official demand increased



in FY02 as previously noted, the increase in occupancy was attributed to greater accommodation of demand during that time – particularly during the summer months of 2002.

The following chart summarizes White Sands historical utilization data by month.



Source: White Sands Missile Range Lodging Administration, compiled by HVS International

Analysis of monthly variances between years reflects the heightened testing activities at the installation in June through September of FY02. Other months followed a relatively consistent demand pattern.

### ***Seasonality***

Records indicated distinct seasonality to White Sands Missile Range's lodging demand. Since missile testing sessions tend to take place during the warm spring and summer months, demand peaked during this time. Special test missions also take place at other times of the year, depending upon weather conditions and the availability of facilities.

### ***Factors Influencing Demand***

Lodging management does not expect any changes in the testing mission's schedule or other known factors that would cause significant changes to demand patterns.

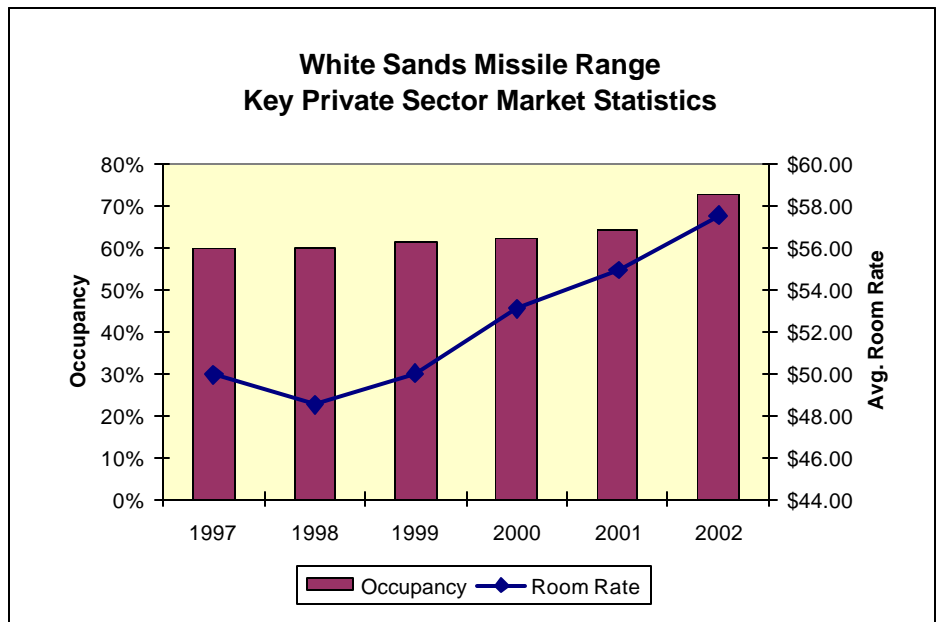
## Private Market Capability

White Sands Missile Range Lodging Operations provides a referral list to Las Cruces area hotels. The referral hotels, comprised of 2,277 rooms, represent a wide range of recognizable chains such as Holiday Inn, Marriott and Hilton. The hotels range in size from 38 to 203 rooms.

Accommodation in the Las Cruces area is usually readily available to installation users. Most activities occurring in Las Cruces take place during the weekends when demand from the installation is weak.

Room rates within the private market ranged from \$34 to \$99. The rounded weighted average rate offered by hotels on the referral list to government travelers was \$65. The rounded market average rate reported by Smith Travel Research for FY02 was modestly lower at \$58. The FY02 off-post lodging per diem rate was \$94. Because of readily available rooms at the lower weighted average rate, our quantitative analysis uses a room rate of \$65.

Rates have risen slowly and consistently in recent years and are expected to continue this trend through the near term.



Source: Smith Travel Research

Although the private market represents a good quality lodging alternative, accommodations are located at a significant distance (approximately 45 minutes or greater driving time) from the installation. There are no

acceptable private market hotels within the 30-minute, rush-hour driving time criterion.

## Demand Requirement Determination

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Data for FY98 and FY99 was not provided for this installation; therefore we used the last three years as the basis for demand projections.

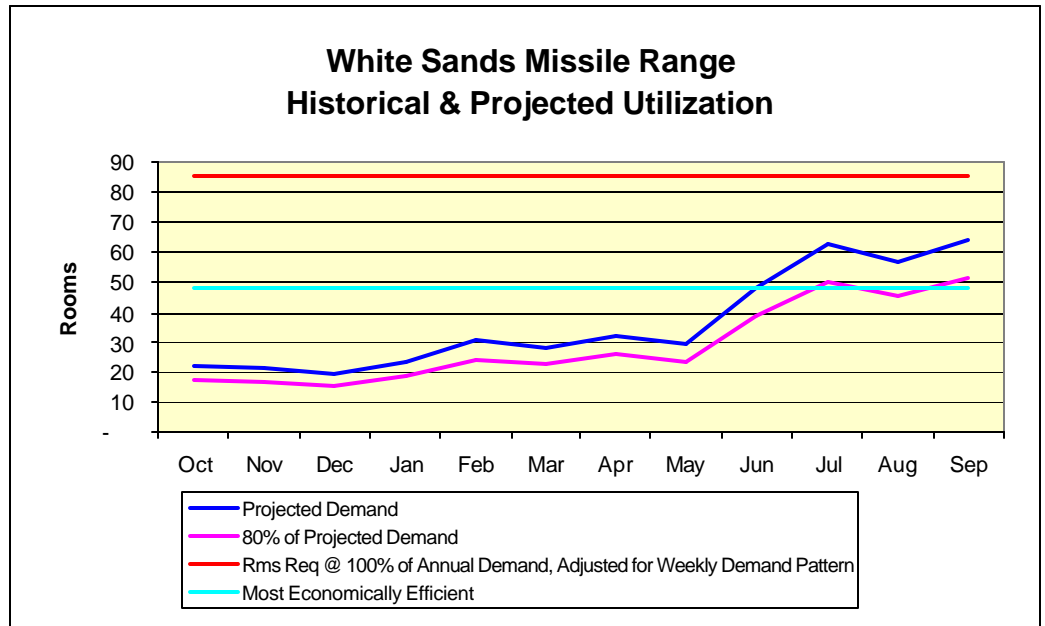
The normalization process eliminated monthly demand variances that were 20% greater or 20% less than average demand for FY00 through FY02. Variances greater or less than 20% of the average are atypical and unlikely to recur. For White Sands Missile Range, normalization resulted in an increase of 180 and 334 room nights in FY00 and FY01, respectively, and a decrease of 1,760 room nights in FY02.

The Core Lodging Requirement objective is to provide sufficient lodging to meet 80% of the official demand. However, as noted in the Private Market Capacity discussion, the lack of nearby hotels requires sufficient lodging on post to meet 100% of the official demand. The total number of rooms required on an annualized basis is therefore equal to 64.

Additionally, forecasting the official demand by month does not take into consideration the day to day demand patterns at this installation. We estimate that 95% of the demand is concentrated Sunday through Thursday, requiring a roughly 33% upward adjustment to a rounded number of 86 rooms.

Another method to determine the number of required rooms applies the "Most Economically Efficient" criterion. This measure compares the cost of having a vacant room to the incremental cost of lodging personnel off post. When the costs of these scenarios are at equilibrium, the most cost efficient number of rooms will be provided from an operating cost perspective. The number of rooms required to achieve this equilibrium for White Sands Missile Range is 48 rooms. With a room inventory of 48 rooms, the expected occupancy is 67% and 89% of the official demand is met.

The following chart compares the alternatives to room inventory to projected demand.

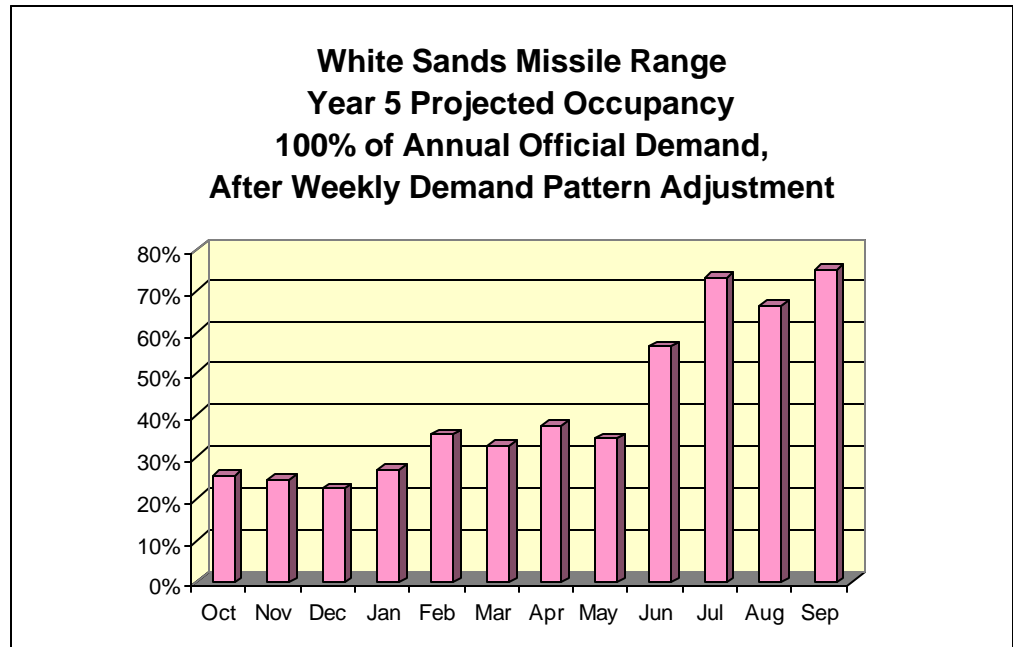


Source: White Sands Missile Range Lodging Administration and HVS International

Due to the lack of nearby off-post lodging, we recommend the results of the 100% of Official Annual Demand analysis, adjusted for the weekly demand pattern.

White Sands Missile Range projected FY08 Average Daily Rate is \$49.11, based on projected operating costs and exclusive of Wellness recommended capital improvement costs.

The chart below presents the expected occupancy percentage on a monthly basis.



Source: HVS International

Using the criterion of 100% of Official Annual Demand and adjusting for the weekly demand pattern, the average occupancy is 43%, and 100% of the official demand is met. On a monthly basis, occupancy varies from a low of 22% in December to 75% in September.

## Summary and Recommendation

- The White Sands Missile Range population declined slightly to 6,058 personnel in FY02; the installation forecasts activity will remain stable with a population near 6,100 by FY05
- The local private sector lodging market is a considerable distance from the installation; accommodation requires a drive time of 45 minutes or longer. Therefore, all official demand should be housed on-post.
- CNAs ranged between 747 and 829 total room nights during the past three years because of the weekly demand patterns at the installation
- The existing demand justifies an adjusted room inventory of 86 units, which will meet 100% of official demand and generate a 43% annual occupancy rate

***Room Count and Mix Recommendation***

- 86 rooms
- Proposed room mix:
  - 49 standard guest rooms
  - 34 extended-stay guest rooms offering a kitchenette
  - 3 extended-stay family suites offering a separate bedroom, sitting/living area, and kitchenette

### Section 4 Facility Assessment and Plans

Each Lodging facility is detailed in this section of the report. The outline of the detail is described below:

- **Summary of Existing Lodging Facility**
- **Significant Assumptions**, identifies criteria used for renovation / replacement cost models.
- **Cost Analysis**, summarizes recommendation based on cost.
- **Attributes**, describes number of rooms and configuration.
- **Condition Analysis and Recommendations** for each of the major systems of the building.
- **Major Functional Criteria Deficit**, describes any major Functional inadequacy based on Army standards.
- **Condition Assessment / Renovation / Replacement Analysis**
  - **Condition Assessment**, summarizes building system deficiencies grouped by CSI with additional hard cost and soft cost.
  - **Renovation**, summarizes building system costs plus functional renovation costs grouped by CSI with additional hard cost and soft cost.
  - **Replacement**, summarizes replacement cost grouped by CSI with additional hard cost and soft cost.



*Bldg 501  
Main Lodging Facility  
White Sands Missile Range, NM*

## **Building 00501**

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Building 501, constructed in 1950, serves as the Main Lodging facility for the White Sands installation. This facility houses 22 standard stay rooms and 2 family suites as well as a portion of the public and back-of-house areas, including the front desk, lobby and administrative offices. There are additional departmental offices currently being housed in the west portion of the facility, including the Housing department. Although this building was renovated in 1998 and is in fair condition, it does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 501 to the new standards and configuration will exceed 50% of the replacement cost.

It should be noted that this structure may be historic and some Army Lodging functional requirements indicated in the report would require clearance from the SHPO or through Army Alternate Procedures; therefore, some of the requirements may need modification, in which case the prices for implementation may vary from the cost models applied.

Our recommendation is to remove building 501 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## **Significant Assumptions**

- The replacement and renovation cost models are based on 34 standard stay rooms, 0 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.



## Cost Analysis

• Renovation Cost	\$2,788,715
• Replacement Cost	\$2,970,490
• Renovation to Replacement Cost Ratio	93.88%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 00501 is not recommended.



Bldg 501  
Exterior View  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	24
02.Number of Units Used	24
03.Main Lodging Facility	Yes
04.Single Room w/o FullKitchen	22
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	2
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	22
11.Operating as Extended Stay	0
12.Operating as Family Suite	2
13.Renovated to Standard	34
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	2
16.Delta renovation	12
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



Bldg 501  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: Guest Rooms: The hard goods, installed in June 1992, consist of a headboard, night stand, dresser, easy chair, fabric covered side chair, desk, and entertainment unit. The loveseats and recliners were installed in 2000. The soft goods, installed in 1998, consist of drapes and sheer drapes on the windows, TV, mattress and box springs and bed coverings. Multi-room units have a small kitchen which includes a two burner electric stove top. All are in good to fair condition.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of load bearing spread footings and wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The basement floor and part of the first floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The building structural frame is reinforced concrete columns, beams and suspended slabs. The structure is of original construction and is in good condition.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat reinforced concrete slab and is in good condition.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is concrete masonry units with stucco and paint. Building has been re-painted and is in fair to good condition.
- Recommendation: No corrective action required.



**Bldg 501**  
**Common Laundry**  
**White Sands Missile Range, NM**

#### **Exterior Windows**

- Analysis: The windows are thermal glazed aluminum frame, replaced in 2002 and are in good condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Exterior doors are thermal glazed, aluminum stile and aluminum frame, replaced in 1998 and are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering, installed in 1985, is a built-up dead level system with gravel rock ballast and is in fair condition. The counter flashings, gutters and downspouts are aluminum and in good condition.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are concrete masonry units at guest room demising walls and metal studs and gypsum drywall at other locations. Partitions are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Interior doors are solid core wood flush with primarily transparent finish and hollow metal frames. Doors to exit access corridors are not fire labeled.
- Recommendation: Replace non-fire labeled doors and frames to exit access corridors.

#### **Stairs**

##### **Stair Construction**

- Analysis: Stairs are of concrete, original construction and are in good condition. The building does not have an elevator however, one is currently under construction; hydraulic, passenger, three landings including the basement. The elevator will serve building 502 also.
- Recommendation: No corrective action required.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed in 1998 and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridors of the 1998 renovation. Guest baths are ceramic tile. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

### **Ceiling Finishes**

- Analysis: The ceiling finishes in the guest room are painted drywall including the bath, of the 1998 renovation, in good condition. Common areas, back of house areas and corridors are primarily 2x2 and 2x4 lay in acoustical panels, in fair condition.
- Recommendation: Repaint the ceilings in the guest rooms and baths. Replace the acoustical ceilings in the common and back of house areas.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted lavatories, porcelainized steel tubs (not plastic shower enclosures) and Eljer floor mounted tank type water closets. Most of the plumbing fixtures are of the 1998 renovation and are in good condition.
- Recommendation: No corrective action required.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a Raypak gas fired hot water boiler through a storage tank. The boiler is 1991 and in good condition.
- Recommendation: Replace domestic water piping system. Cost analysis is based on 75% of total building area.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The heating and air conditioning system consists of: Guest Rooms; Trane package through-wall heat pumps with electric heat added. These units were installed in 1991 and are in good condition. Public, common and shared use spaces: 2002 Carrier package rooftop units and split system with exterior condensing units with hot water heat, in good condition. The heating system features a ThermoPak gas fired boiler installed in 1991 and in good condition.
- Recommendation: No corrective action required.

## **Fire Protection**

### **Sprinklers**

- Analysis: The building has a fire sprinkler system in the Administration area and corridors only, installed in 1980 and in fair condition. The guest rooms do not have fire sprinklers.
- Recommendation: Replace fire sprinkler system in non-guest room areas. Install fire sprinkler system in guest rooms.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from a utility pad mount transformer with two meters supplying 120/208 volt, three phase power. There are two electrical services to the building which also serves Building 502. The original service features a Cutler-Hammer 400 amp switch serving an adjacent distribution panelboard. This service is in fair condition. The newer service, installed with the 1991 air conditioning upgrades features an 800 amp service from the outside transformer to two Square D 400 amp distribution panelboards in good condition. Lighting consists of paddle fan fixtures and residential type incandescent fixtures in the guest rooms, incandescent wall sconces in the corridors and 2x4 fluorescent troffers in the Administration area. All lighting is in good condition, however the ambient lighting in the corridors is not adequate.
- Recommendation: Install adequate ambient lighting in the guest room corridors.

### **Communications and Security**

- Analysis: There are a total of three fire alarm control panels and two fire alarm systems in the building; an older Gamewell Zans non-addressable system, in fair condition, serves the Administration area only; a 2002 Notifier AFP-200 addressable system, in like new condition, serves the guest room areas only. There is a third control panel, a Gamewell Zans which serves building 502.
- Recommendation: Replace fire alarm system in the Administration area.

## **Equipment**

### **Other Equipment**

- Analysis: There is a community guest laundry on the second floor containing two washers, two dryers, a sink and folding counter, all in good condition. The two family suites have kitchens which include a range, refrigerator, microwave and two compartment sink, all in good condition.
- Recommendation: No corrective action required.

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site earthwork is properly graded to promote drainage away from the building. There are also manufactured stone berms with landscaping, in good condition.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The parking lot consists of surface treatment asphalt surface and has adequate spaces for the building. The lot has access to the main roads and is adjacent to the building. The parking lot is in good condition.
- Recommendation: No corrective action required.

## Site Electrical Utilities

### Site Lighting

- Analysis: The site lighting, installed in 2003, is solar powered square discharge units on steel poles and appear to be in like new condition. There is also ambient lighting at the entrance and exits, in good condition. There is a general lacking of exterior area security lighting.
- Recommendation: Install additional exterior area security lighting.



Bldg 501  
Guest Room  
White Sands Missile Range, NM

## Major Functional Criteria

### CFSC Lodging Standards

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

#### Back of the House Spaces

- **Accessible Staff Toilets**  
Rooms exist in building 502 which is an addition to building 501.  
Renovation not required.
- **Administration Conference Room**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Administration Offices**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Assistant Manager Offices**  
Exceeds s.f. requirements; space is 267 s.f, standard is 120 s.f.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Break Room**  
Is located in building 502 which is an addition to building 501.  
Renovation not required.
- **Bulk Storage Area**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Cash Room**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Front Office Manager**  
Meets majority of Functional Criteria.  
Renovation not required.
- **General Storage Area**  
Undersized; space is 212 s.f, standard is 500 s.f., however, additional storage is located in building 502 which is an addition to building 501.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Housekeeping Office**  
Is located in building 502 which is an addition to building 501.  
Renovation not required.
- **Housekeeping Rooms**  
Undersized.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **In-House Laundry Area**  
Is located in building 502 which is an addition to building 501.  
Renovation not required.
- **Janitor Closet**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Kitchen Preparation Area**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; function will be included in new Lodging facility as part of the Wellness Recommendation.
- **Luggage Storage**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Maintenance Area**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Manager's Office**  
Exceeds s.f. requirements; space is 266 s.f, standard is 180 s.f.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Receiving**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Receiving Office**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Service Corridors**  
Corridor is 6 feet wide, standard is 8 feet wide.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Service Elevators**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Utility Rooms  
(Mech/Elec/Data/Comm/Switch/Elevator Equipment Rooms)**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Guest Rooms**

- **Family Suites**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Standard Stay Rooms**  
Exceeds s.f. requirements; space ranges from 482-600 s.f, standard is 300 s.f.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Public Spaces**

- **Accessible Public Toilets**  
Men room is undersized.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Breakfast Bar**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Front Desk**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Guest Bulk Storage**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.



- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Lobby**  
Undersized; space is 367 s.f, standard is 500-800 s.f.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Multi Purpose Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Non Standard Space**  
Common Guest Kitchen - 165 s.f. contains residential 4 burner stove/oven, upper & lower cabinets w/counter, table w/chairs, 2 microwaves and full size refrigerator.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Passenger Elevators**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Public Corridors**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Public Telephone Area**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Stairs**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vending**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area and close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
Existing Lodging facility siting does consider force protection building separation, unobstructed space requirements, and road and parking constraints; siting is not close to an access roadway.

- **Site Amenities**

The exterior common areas meets Lodging standards and includes some site amenities, exterior common areas, and recreational areas. Existing grounds are well maintained. Exterior signage is appropriate and directive. Landscape materials and selections use local materials and practices.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>13.13%</b>	<b>\$80,228.68</b>
Built-up Roof: Beyond Useful Life		\$80,228.68
<b>08 Doors &amp; Windows</b>	<b>7.34%</b>	<b>\$44,844.80</b>
Wood Door - Door Not Rated		\$44,844.80
<b>09 Finishes</b>	<b>14.78%</b>	<b>\$90,363.13</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$16,619.80
Carpet: Beyond Useful Life		\$37,488.43
Interior ceilings: Paint Failing		\$6,237.48
Vinyl walcovering, missing or inadequate		\$30,017.42
<b>13 Special Construction</b>	<b>29.63%</b>	<b>\$181,136.03</b>
Fire Alarm System: Beyond Useful Life		\$17,051.00
Fire Sprinklers: Beyond Useful Life		\$86,756.40
Fire Sprinklers: Missing or Inadequate		\$77,328.63
<b>15 Mechanical</b>	<b>12.59%</b>	<b>\$76,973.82</b>
Pipe, domestic water: Beyond expected useful life		\$76,973.82
<b>16 Electrical</b>	<b>2.89%</b>	<b>\$17,685.04</b>
Fixtures, Incandescent: Missing or inadequate		\$12,035.00
Inadequate exterior Lighting		\$5,650.04
<b>19 FF&amp;E</b>	<b>19.63%</b>	<b>\$120,000.00</b>
Hard and soft goods: Beyond expected useful life		\$120,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$611,232.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$3,361.78
Force Protection	9.00%	\$60,814.53
General Conditions	10.00%	\$61,123.20
<b>Total Additional Hard Cost</b>		<b>\$125,299.50</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$73,653.15
SIOH Conus	6.50%	\$52,662.00
Design	10.00%	\$73,653.15
08 MYr Inflation Fct	9.93%	\$92,994.43
<b>Total Soft Cost</b>		<b>\$292,962.73</b>
<b>Total Project</b>		<b>\$1,029,494.24</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>1.86%</b>	<b>\$30,878.40</b>
Site Earthwork		\$30,878.40
<b>03 Concrete</b>	<b>0.44%</b>	<b>\$7,350.00</b>
Stair Construction		\$7,350.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.82%</b>	<b>\$63,292.82</b>
Roof Coverings		\$63,292.82
<b>08 Doors &amp; Windows</b>	<b>2.10%</b>	<b>\$34,776.00</b>
Interior Doors		\$34,776.00
<b>09 Finishes</b>	<b>22.43%</b>	<b>\$371,310.45</b>
Ceiling Finishes		\$67,832.10
Floor Finishes		\$110,609.76
Partitions		\$71,946.67
Wall Finishes		\$120,921.92
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$2,791.80</b>
Fittings		\$2,791.80
<b>11 Equipment</b>	<b>0.42%</b>	<b>\$7,000.00</b>
Other Equipment		\$7,000.00
<b>13 Special Construction</b>	<b>12.61%</b>	<b>\$208,713.40</b>
Communications & Security		\$93,955.70
Sprinklers		\$114,757.70
<b>15 Mechanical</b>	<b>27.13%</b>	<b>\$449,260.00</b>
Cooling Generating Systems		\$277,360.00
Domestic Water Dist		\$66,600.00
Plumbing Fixtures		\$105,300.00
<b>16 Electrical</b>	<b>18.14%</b>	<b>\$300,345.00</b>
Electrical Service & Distribution		\$294,695.00
Site Lighting		\$5,650.00
<b>19 FF&amp;E</b>	<b>10.87%</b>	<b>\$180,000.00</b>
Interior FF&E allowance		\$180,000.00
Total Raw Cost	100.00%	\$1,655,717.87

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$9,106.45
Force Protection	9.00%	\$164,735.65
General Conditions	10.00%	\$165,571.79
<b>Total Additional Hard Cost</b>		<b>\$339,413.89</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$199,513.18
SIOH Conus	6.50%	\$142,651.92
Design	10.00%	\$199,513.18
08 MYr Inflation Fct	9.93%	\$251,905.24

Building 00501

<b>Total Soft Cost</b>	<b>\$793,583.51</b>
<b>Total Project Cost for Renovation</b>	<b>\$2,788,715.27</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>4.31%</b>	<b>\$86,419.13</b>
Parking Lots		\$30,400.00
Site Earthwork		\$56,019.13
<b>03 Concrete</b>	<b>15.74%</b>	<b>\$315,744.25</b>
Floor Construction		\$184,079.25
Slab on Grade		\$41,440.00
Stair Construction		\$7,350.00
Standard Foundations		\$82,875.00
<b>04 Masonry</b>	<b>5.68%</b>	<b>\$114,017.80</b>
Exterior Walls		\$114,017.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.39%</b>	<b>\$148,355.51</b>
Roof Construction		\$46,150.12
Roof Coverings		\$102,205.40
<b>08 Doors &amp; Windows</b>	<b>9.86%</b>	<b>\$197,843.00</b>
Exterior Doors		\$9,825.00
Exterior Windows		\$152,000.00
Interior Doors		\$36,018.00
<b>09 Finishes</b>	<b>14.56%</b>	<b>\$292,182.46</b>
Ceiling Finishes		\$44,359.68
Floor Finishes		\$110,167.03
Partitions		\$77,500.23
Wall Finishes		\$60,155.52
<b>11 Equipment</b>	<b>0.35%</b>	<b>\$7,000.00</b>
Other Equipment		\$7,000.00
<b>13 Special Construction</b>	<b>4.97%</b>	<b>\$99,781.50</b>
Communications & Security		\$44,918.25
Sprinklers		\$54,863.25
<b>15 Mechanical</b>	<b>21.33%</b>	<b>\$428,000.00</b>
Cooling Generating Systems		\$132,600.00
Domestic Water Dist		\$66,600.00
Plumbing Fixtures		\$228,800.00
<b>16 Electrical</b>	<b>7.33%</b>	<b>\$147,052.50</b>
Electrical Service & Distribution		\$144,857.50
Site Lighting		\$2,195.00
<b>19 FF&amp;E</b>	<b>8.47%</b>	<b>\$170,000.00</b>
Interior FF&E allowance		\$170,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,006,396.15</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$11,035.18
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$200,639.61
<b>Total Additional Hard Cost</b>		<b>\$211,674.79</b>

Building 00501

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$110,903.55
SIOH Conus	6.50%	\$151,383.34
Design	10.00%	\$221,807.09
08 MYr Inflation Fct	9.93%	\$268,324.98
<b>Total Soft Cost</b>		<b>\$752,418.96</b>
<b>Total Project Cost for Replacement</b>		<b>\$2,970,489.90</b>

**INSERT BUILDING 501 FLOOR PLANS HERE**





*Bldg 502  
Courtyard View  
White Sands Missile Range, NM*

## **Building 00502**

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Building 502, constructed in 1952, is a 2-story structure housing 19 family suites. This facility was built as an addition to the original Main Lodging facility, building 501, and includes several back-of-the-house areas which serve both facilities. Although this building was renovated in 1998 and is in fair condition, it does not meet the demand requirements of only 3 family suites, and cannot be reconfigured to the standard/extended stay rooms without significant reconstruction. To renovate building 502 to the new configuration will exceed 50% of the replacement cost.

It should be noted that this structure may be historic and some Army Lodging functional requirements indicated in the report would require clearance from the SHPO or through Army Alternate Procedures; therefore, some of the requirements may vary from the cost models applied.

Our recommendation is to remove building 502 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## **Significant Assumptions**

- The replacement and renovation cost models are based on 0 standard stay rooms, 36 extended stay rooms and 0 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$2,178,502
• Replacement Cost	\$3,118,578
• Renovation to Replacement Cost Ratio	69.86%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 00502 is not recommended.



Bldg 502  
Exterior View  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	19
02.Number of Units Used	19
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	19
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	19
13.Renovated to Standard	0
14.Renovated to Extended Stay	36
15.Renovated to Family Suite	0
16.Delta renovation	17
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



Bldg 502  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: Guest Rooms: The hard goods, installed in 1992, consist of a headboard, night stand, dresser, easy chair, fabric covered side chair, desk, and entertainment unit. The sofas and recliners were installed in September 1998. The soft goods, installed in 1998, consist of drapes and shear drapes on the windows, TV, mattress and box springs and bed coverings. Multi-room units have a small kitchen which includes a two burner electric stove top. All are in good to fair condition.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of load bearing spread footings and wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The first floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The building structural frame is reinforced concrete columns, beams and suspended slabs. The structure is of original construction and is in good condition.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat reinforced concrete slab and is in good condition.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is concrete masonry units with stucco and paint. Building has been re-painted and is in fair to good condition.
- Recommendation: No corrective action required.



**Bldg 502**  
**Kitchenette**  
**White Sands Missile Range, NM**

#### **Exterior Windows**

- Analysis: The windows are thermal glazed aluminum frame, replaced in April 2003 and are in like new condition.
- Recommendation: No corrective action required.

#### **Exterior Doors**

- Analysis: Exterior doors are thermal glazed, aluminum stile and aluminum frame, replaced in 1998 and are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering, installed in 1985, is a built-up dead level system with gravel rock ballast and is in fair condition. The counter flashings, gutters and downspouts are aluminum and in good condition.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are concrete masonry units at guest room demising walls and metal studs and gypsum drywall at other locations. Partitions are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Interior doors are solid core wood flush with primarily transparent finish and transparent finish wood frames. Doors to exit access corridors are not fire labeled.
- Recommendation: Replace non-fire labeled doors and frames to exit access corridors.

#### **Stairs**

##### **Stair Construction**

- Analysis: Stairs are of concrete, original construction and are in good condition. The building does not have an elevator however one is under construction in Building 501 which will also serve Building 502.
- Recommendation: No corrective action required.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed in 1998 and in good condition. Baths are paint finish plus 4x4 ceramic tile.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridors of the 1998 renovation. Guest baths are ceramic tile. All are in good condition.

- Recommendation: Replace the carpet in the guest rooms and corridors.

#### **Ceiling Finishes**

- Analysis: The ceiling finishes in the guest room are painted drywall including the bath, of the 1998 renovation, in good condition. Common areas, back of house areas and corridors are primarily 2x2 and 2x4 lay in acoustical panels, in fair condition.
- Recommendation: Repaint the ceilings in the guest rooms and baths. Replace the acoustical ceilings in the common and back of house areas.

#### **Plumbing**

##### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted lavatories and Eljer floor mounted tank type water closets. There are plastic tub and shower units at accessible room baths. Most of the plumbing fixtures are of the 1998 renovation and are in good condition.
- Recommendation: No corrective action required.

##### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a Raypak gas fired hot water boiler through a storage tank located in Building 501.
- Recommendation: Replace domestic water piping system. Cost analysis is based on 75% of total building area.

#### **HVAC**

##### **Cooling Generating Systems**

- Analysis: The heating and air conditioning system consists of: Guest Rooms; Trane package through-wall heat pumps with electric heat added. These units were installed in 1991 and are in good condition.
- Recommendation: No corrective action required.

#### **Fire Protection**

##### **Sprinklers**

- Analysis: The building does not have a sprinkler system.
- Recommendation: Install fire sprinkler system.

#### **Electrical**

##### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from a distribution panelboard, located in the basement of Building 501, supplying 120/208 volt, three phase power. There are several Square D lighting and distribution panelboards in the corridors, installed as part of the 1998 renovation, in like new condition. Lighting consists of paddle fan fixtures and residential type incandescent fixtures in the guest rooms and incandescent wall sconces in the corridors. All lighting is in good condition, however the ambient lighting in the corridors is not adequate.
- Recommendation: Install adequate ambient lighting in the guest room corridors.

#### **Communications and Security**

- Analysis: The fire alarm system is a Gamewell Zans non-addressable system of pre-1990 vintage. The system is functioning and is in fair condition.
- Recommendation: Replace Fire Alarm system with modern addressable system.

#### **Equipment**

##### **Other Equipment**

- Analysis:
- Recommendation:

#### **Site Preparation**

##### **Site Earthwork**

- Analysis: The site earthwork is properly graded to promote drainage away from the building. There are also manufactured stone berms with landscaping, in good condition.
- Recommendation: No corrective action required.

#### **Site Improvements**

##### **Parking Lots**

- Analysis: The parking lot, consisting of surface treatment asphalt surface, is located in front of Building 501 and has adequate spaces for the building. The lot has access to the main roads and is adjacent to the building. The parking lot is in good condition.
- Recommendation: No corrective action required.

#### **Site Electrical Utilities**

##### **Site Lighting**

- Analysis: The site lighting, installed in 1998, is solar powered square discharge units on steel poles and appear to be in good condition. There is also ambient lighting at the exits, in good condition. There is a general lacking of exterior area security lighting.
- Recommendation: Install additional exterior area security lighting.



Bldg 502  
Guest Room  
White Sands Missile Range, NM

## Major Functional Criteria

### CFSC Lodging Standards

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

#### Back of the House Spaces

- **Accessible Staff Toilets**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Break Room**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **General Storage Area**  
Exists as part of Main Lodging requirements for building 501. Building 502 is an addition to building 501.  
Renovation not required.
- **Housekeeping Office**  
Exists as part of Main Lodging requirements for building 501. Building 502 is an addition to building 501.  
Renovation not required.
- **Housekeeping Rooms**  
Meets majority of Functional Criteria.  
Renovation not required.
- **In-House Laundry Area**  
Exists as part of Main Lodging requirements for building 501, however, is undersized at 350 s.f., standard is 500 s.f. Building 502 is an addition to building 501.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Janitor Closet**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Service Corridors**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.
- **Service Elevators**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

**Guest Rooms**

- **Family Suites**

Meets majority of Functional Criteria.  
Renovation not required.

**Public Spaces**

- **Guest Bulk Storage**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**

Undersized; space is 100 s.f, standard is 300 s.f.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Passenger Elevators**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Public Corridors**

Meets majority of Functional Criteria.  
Renovation not required.

- **Stairs**

Meets majority of Functional Criteria.  
Renovation not required.

- **Vending**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Vestibule**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

**Site**

- **Community Planning**

The existing Lodging building is located within a well defined campus area and close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is context with regional influences.

- **Force Protection**

Existing Lodging facility siting does consider force protection building separation, unobstructed space requirements, and road and parking constraints; siting is not close to an access roadway.

- **Site Amenities**

Several required site amenities do not exist. Site amenities do not meet Lodging standards including location, playground equipment, and exterior common areas. Existing landscape is well designed and maintained.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.05%</b>	<b>\$30,752.24</b>
Built-up Roof: Beyond Useful Life		\$30,752.24
<b>08 Doors &amp; Windows</b>	<b>9.65%</b>	<b>\$32,771.20</b>
Wood Door - Door Not Rated		\$32,771.20
<b>09 Finishes</b>	<b>19.07%</b>	<b>\$64,775.72</b>
Acoustical Ceiling & Grid: Beyond expt useful life		\$9,650.21
Carpet: Beyond Useful Life		\$28,398.41
Interior ceilings: Paint Failing		\$5,470.48
Vinyl walcovering, missing or inadequate		\$21,256.62
<b>13 Special Construction</b>	<b>21.90%</b>	<b>\$74,365.21</b>
Fire Alarm System: Beyond Useful Life		\$13,137.60
Fire Sprinklers: Missing or Inadequate		\$61,227.61
<b>15 Mechanical</b>	<b>7.88%</b>	<b>\$26,757.10</b>
Pipe, domestic water: Beyond expected useful life		\$26,757.10
<b>16 Electrical</b>	<b>4.47%</b>	<b>\$15,195.04</b>
Fixtures, Incandescent: Missing or inadequate		\$9,545.00
Inadequate exterior Lighting		\$5,650.04
<b>19 FF&amp;E</b>	<b>27.97%</b>	<b>\$95,000.00</b>
Hard and soft goods: Beyond expected useful life		\$95,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$339,617.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,867.89
Force Protection	9.00%	\$33,790.19
General Conditions	10.00%	\$33,961.70
<b>Total Additional Hard Cost</b>		<b>\$69,619.79</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$40,923.68
SIOH Conus	6.50%	\$29,260.43
Design	10.00%	\$40,923.68
08 MYr Inflation Fct	9.93%	\$51,670.22
<b>Total Soft Cost</b>		<b>\$162,778.00</b>
<b>Total Project</b>		<b>\$572,014.79</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.29%</b>	<b>\$29,635.20</b>
Site Earthwork		\$29,635.20
<b>03 Concrete</b>	<b>0.57%</b>	<b>\$7,350.00</b>
Stair Construction		\$7,350.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>2.21%</b>	<b>\$28,621.26</b>
Roof Coverings		\$28,621.26
<b>08 Doors &amp; Windows</b>	<b>2.62%</b>	<b>\$33,948.00</b>
Interior Doors		\$33,948.00
<b>09 Finishes</b>	<b>27.93%</b>	<b>\$361,256.30</b>
Ceiling Finishes		\$65,998.80
Floor Finishes		\$109,717.24
Partitions		\$69,050.02
Wall Finishes		\$116,490.24
<b>10 Specialties</b>	<b>0.22%</b>	<b>\$2,791.80</b>
Fittings		\$2,791.80
<b>11 Equipment</b>	<b>9.74%</b>	<b>\$126,000.00</b>
Other Equipment		\$126,000.00
<b>13 Special Construction</b>	<b>7.19%</b>	<b>\$93,045.12</b>
Communications & Security		\$41,885.76
Sprinklers		\$51,159.36
<b>15 Mechanical</b>	<b>22.71%</b>	<b>\$293,748.00</b>
Cooling Generating Systems		\$123,648.00
Domestic Water Dist		\$64,800.00
Plumbing Fixtures		\$105,300.00
<b>16 Electrical</b>	<b>10.59%</b>	<b>\$137,026.00</b>
Electrical Service & Distribution		\$131,376.00
Site Lighting		\$5,650.00
<b>19 FF&amp;E</b>	<b>13.92%</b>	<b>\$180,000.00</b>
Interior FF&E allowance		\$180,000.00
Total Raw Cost	100.00%	\$1,293,421.68

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$7,113.82
Force Protection	9.00%	\$128,688.99
General Conditions	10.00%	\$129,342.17
<b>Total Additional Hard Cost</b>		<b>\$265,144.98</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$155,856.67
SIOH Conus	6.50%	\$111,437.52
Design	10.00%	\$155,856.67
08 MYr Inflation Fct	9.93%	\$196,784.55

Building 00502

<b>Total Soft Cost</b>	<b>\$619,935.39</b>
<b>Total Project Cost for Renovation</b>	<b>\$2,178,502.05</b>

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>4.03%</b>	<b>\$84,846.38</b>
Parking Lots		\$30,400.00
Site Earthwork		\$54,446.38
<b>03 Concrete</b>	<b>14.63%</b>	<b>\$308,110.31</b>
Floor Construction		\$179,940.31
Slab on Grade		\$40,275.00
Stair Construction		\$7,350.00
Standard Foundations		\$80,545.00
<b>04 Masonry</b>	<b>5.31%</b>	<b>\$111,906.36</b>
Exterior Walls		\$111,906.36
<b>07 Thermal &amp; Moisture Protection</b>	<b>6.84%</b>	<b>\$144,017.37</b>
Roof Construction		\$44,655.47
Roof Coverings		\$99,361.90
<b>08 Doors &amp; Windows</b>	<b>9.73%</b>	<b>\$205,015.00</b>
Exterior Doors		\$9,825.00
Exterior Windows		\$160,000.00
Interior Doors		\$35,190.00
<b>09 Finishes</b>	<b>13.48%</b>	<b>\$283,985.96</b>
Ceiling Finishes		\$42,965.79
Floor Finishes		\$109,359.96
Partitions		\$74,603.57
Wall Finishes		\$57,056.64
<b>11 Equipment</b>	<b>5.98%</b>	<b>\$126,000.00</b>
Other Equipment		\$126,000.00
<b>13 Special Construction</b>	<b>4.60%</b>	<b>\$96,976.18</b>
Communications & Security		\$43,655.39
Sprinklers		\$53,320.79
<b>15 Mechanical</b>	<b>20.06%</b>	<b>\$422,472.00</b>
Cooling Generating Systems		\$128,872.00
Domestic Water Dist		\$64,800.00
Plumbing Fixtures		\$228,800.00
<b>16 Electrical</b>	<b>6.79%</b>	<b>\$143,091.50</b>
Electrical Service & Distribution		\$140,896.50
Site Lighting		\$2,195.00
<b>19 FF&amp;E</b>	<b>8.55%</b>	<b>\$180,000.00</b>
Interior FF&E allowance		\$180,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$2,106,421.06</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$11,585.32
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$210,642.11
<b>Total Additional Hard Cost</b>		<b>\$222,227.42</b>

Building 00502

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$116,432.42
SIOH Conus	6.50%	\$158,930.26
Design	10.00%	\$232,864.85
08 MYr Inflation Fct	9.93%	\$281,701.79
<b>Total Soft Cost</b>		<b>\$789,929.32</b>
<b>Total Project Cost for Replacement</b>		<b>\$3,118,577.80</b>

**INSERT BUILDING 502 FLOOR PLANS HERE**



*Bldg 506  
Exterior View  
White Sands Missile Range, NM*

## **Building 00506**

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Building 506, constructed in 1986, houses 15 extended stay rooms. Although this building was renovated in 1996 and is in fair condition, many support spaces do not exist and the existing room size is slightly larger than standards. To renovate building 506 to include the appropriate support spaces and meet standards will not exceed 50% of the replacement cost.

The Wellness Recommendation is to retain building 506 in the White Sands Lodging inventory. This facility will remain in the White Sands Missile Range Wellness Solution and Lodging Master Plan.

### **Significant Assumptions**

- The replacement cost model is based on 0 standard stay rooms, 13 extended stay rooms and 0 family suites.
- The upgrade cost model uses the existing building foot print, with the plan reworked to meet current lodging size requirements.
- This building is in good condition for both the Condition Assessment and Function Criteria. In this building the Condition Assessment costs include the wellness items and the Upgrade Cost includes functional renovations but not Condition Assessment cost.
- The upgrade and replacement cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

### **Cost Analysis**

• Condition Assessment & Upgrade Cost	\$358,765
• Replacement Cost	\$1,388,993
• Condition Assessment & Upgrade to Replacement	25.83%
Cost Ratio	

Because the Sum of the Condition Assessment and Upgrade Costs to Replacement Cost Ratio is less than 50.00%, repair, upgrade, and continued use of Building 00506 is recommended.



Bldg 506  
Exterior Walkway  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	15
02.Number of Units Used	15
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	15
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	15
12.Operating as Family Suite	0
13.Renovated to Standard	0
14.Renovated to Extended Stay	13
15.Renovated to Family Suite	0
16.Delta renovation	-2
17.Remove from Inventory	No
18.Upgrade Renv Cost Model Req	Yes
19.Renv Cost Model Req	No





Bldg 506  
Kitchenette  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: Guest Rooms: The hard goods most of which were installed in 1996, consist of a headboard, night stand, dresser, 1 or 2 easy chairs, side chair, desk, and TV cabinet. The soft goods, also installed in 1996, consist of drapes on the windows, TV, mattress and box springs and bed coverings. Units have a small kitchen which includes a two burner electric stove top. All are in good condition.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of load bearing spread footings and wall bearing continuous footings. Some indications of differential settlement can be seen from the exterior. Foundation is generally in good condition.
- Recommendation: Maintain monitor of wall cracks for a period of approximately two years after repair of masonry cracks as recommended in Exterior Wall system. If evidence of settlement remains, a structural engineer should be called in to further investigate the foundation.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The building structural frame is reinforced concrete columns, beams and suspended roof slab. The structure is of original construction and is in good condition.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat reinforced concrete slab and is in good condition.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The outer exterior covered walkway system is of reinforced concrete and stucco, in good condition. The inner exterior wall enclosure is decorative 4x16 face concrete masonry units (CMU). There is cracking in the masonry joints in several places.
- Recommendation: Repair mortar joints in CMU walls.



**Bldg 506**  
**Guest Room Ceiling**  
**White Sands Missile Range, NM**

#### **Exterior Windows**

- Analysis: Windows are aluminum frame, partially operable with fabric screens, of original construction and in fair condition.
- Recommendation: Replace windows with new double glazed, energy efficient window units.

#### **Exterior Doors**

- Analysis: Exterior doors are hollow metal in hollow metal frames in fair condition. Frames are in good condition.
- Recommendation: Replace exterior doors in existing hollow metal frames.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering, installed in 1986, is a built-up dead level system with gravel rock ballast and is in fair condition. The counter flashings, gutters and downspouts are aluminum and in good condition.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: Interior partitions are gypsum wallboard on metal studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: The interior doors are solid core wood doors with transparent finish in hollow metal frames. The doors are in good condition.
- Recommendation: Refinish interior doors, paint metal frames and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed in 1996 and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet with wood base in the guest rooms, renewed in 1996. Guest baths are ceramic tile but with wood base. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms.

##### **Ceiling Finishes**

- Analysis: Interior ceiling finishes consist of painted drywall, renewed in 1996. Ceiling finishes are in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted lavatories, porcelainized steel tubs (not plastic shower enclosures) and floor mounted tank type water closets, all in fair to good condition.
- Recommendation: No corrective action required.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in good condition. Hot water is supplied from an A.O. Smith 100 gallon, gas fired water heater in good condition. There is a minor pipe insulation damage at the water heater.
- Recommendation: Repair or replace pipe insulation at water heater. No other corrective action required

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system feature Trane package rooftop units with gas heat. Units are dated June 1999 and are in good condition.
- Recommendation: No corrective action required.

## **Fire Protection**

### **Sprinklers**

- Analysis: The building has a sprinkler system, full coverage and in good condition.
- Recommendation: No corrective action required.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an outside utility pad mount transformer with 7200 volts primary supplying 120/208 volts, three phase power to an interior Westinghouse 300 amp main breaker panelboard of original construction and in good condition. Lighting in guest rooms is primarily wall bracket mounted lamp fixtures.
- Recommendation: No corrective action required.

### **Communications and Security**

- Analysis: The fire alarm system consists of Gamewell devices and a Notifier 500 non-addressable control panel, estimated to be of original construction.
- Recommendation: Replace fire alarm system.

## **Equipment**

### **Other Equipment**

- Analysis:
- Recommendation:

## **Site Preparation**

### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks and gravel stone, shrubbery and grass landscaping. There are no signs of ponding and there does not appear to be any erosion.
- Recommendation: No corrective action required.

## **Site Improvements**

### **Parking Lots**

- Analysis: The parking lot consists of stone surface treatment and has adequate spaces for the building. The lot has access to the main roads and is adjacent to the building. The parking lot is in good condition.
- Recommendation: No corrective action required.

## **Site Electrical Utilities**

### **Site Lighting**

- Analysis: Site lighting is round HID units on round metal poles and round concrete bases, in good condition.
- Recommendation: No corrective action required.



Bldg 506  
Guest Room  
White Sands Missile Range, NM

## **Major Functional Criteria**

### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

#### **Back of the House Spaces**

- **Accessible Staff Toilets**  
Does not exist, is required based on Functional Criteria. Renovation will include function as part of Wellness Recommendation.
- **Break Room**  
Does not exist, is required based on Functional Criteria. Renovation will include function as part of Wellness Recommendation.
- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria. Renovation will relocate function as part of Wellness Recommendation.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria. Renovation will include function as part of Wellness Recommendation.

- **Service Corridors**  
Does not exist, is required based on Functional Criteria.  
Renovation not required based on layout of building.

#### **Guest Rooms**

- **Extended Stay Rooms**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria.  
Renovation will include function as part of Wellness Recommendation.
- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Guest Study Areas**  
Does not exist, is required based on Functional Criteria.  
Renovation will include function as part of Wellness Recommendation.
- **Public Corridors**  
Building is exterior access.  
Renovation not required. Not cost effective to add based on building configuration.
- **Public Telephone Area**  
Does not exist, is required based on Functional Criteria.  
Renovation will include function as part of Wellness Recommendation.
- **Stairs**  
1 story building, not required.
- **Vending**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Building is exterior access.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area and close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is context with regional influences. The existing Lodging campus mass and scale blends with surrounding architecture, but does not provide visual interest.

- **Force Protection**  
The existing Lodging facility siting does not consider force protection setback constraints from existing roads and parking. Roads and parking are constructed adjacent to the existing Lodging buildings, within force protection setback constraints. Building separations are acceptable.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>03 Concrete</b>	<b>2.83%</b>	<b>\$5,000.00</b>
Structural Foundation - Damaged or Failing		\$5,000.00
<b>04 Masonry</b>	<b>3.70%</b>	<b>\$6,540.00</b>
CMU Wall Mortar: Damaged or Cracked		\$6,540.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>15.91%</b>	<b>\$28,097.18</b>
Built-up Roof: Beyond Useful Life		\$28,097.18
<b>08 Doors &amp; Windows</b>	<b>16.49%</b>	<b>\$29,130.31</b>
Al. Windows - Beyond Useful Life		\$7,931.06
Exterior Steel Door - Beyond expected useful life		\$12,962.75
Wood Door - Damaged or Failing		\$8,236.50
<b>09 Finishes</b>	<b>15.04%</b>	<b>\$26,552.24</b>
Carpet: Beyond Useful Life		\$13,434.43
Interior ceilings: Paint Failing		\$3,495.75
Vinyl walcovering, missing or inadequate		\$9,622.06
<b>13 Special Construction</b>	<b>3.43%</b>	<b>\$6,057.95</b>
Fire Alarm System: Beyond Useful Life		\$6,057.95
<b>15 Mechanical</b>	<b>0.13%</b>	<b>\$224.00</b>
Pipe insulation: Missing or inadequate		\$224.00
<b>19 FF&amp;E</b>	<b>42.47%</b>	<b>\$75,000.00</b>
Hard and soft goods: Beyond expected useful life		\$75,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$176,602.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$971.31
Force Protection	9.00%	\$17,571.02
General Conditions	10.00%	\$17,660.20
<b>Total Additional Hard Cost</b>		<b>\$36,202.53</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$21,280.45
SIOH Conus	6.50%	\$15,215.52
Design	10.00%	\$21,280.45
08 MYr Inflation Fct	9.93%	\$26,868.69
<b>Total Soft Cost</b>		<b>\$84,645.12</b>
<b>Total Project</b>		<b>\$297,449.65</b>

## Upgrade Renovation

The Upgrade Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. Due to the limited nature of this cost model, the Condition Assessment Costs are not included.

### Summary of Project Upgrade Renovation Cost

CSI	Percent	Amount
<b>08 Doors &amp; Windows</b>	<b>5.83%</b>	<b>\$2,124.00</b>
Exterior Doors		\$1,296.00
Interior Doors		\$828.00
<b>09 Finishes</b>	<b>72.16%</b>	<b>\$26,270.05</b>
Ceiling Finishes		\$2,295.99
Floor Finishes		\$3,460.36
Partitions		\$19,109.92
Wall Finishes		\$1,403.79
<b>13 Special Construction</b>	<b>8.26%</b>	<b>\$3,006.09</b>
Communications & Security		\$394.50
Sprinklers		\$2,611.59
<b>15 Mechanical</b>	<b>7.24%</b>	<b>\$2,637.50</b>
Cooling Generating Systems		\$394.50
Plumbing Fixtures		\$2,243.00
<b>16 Electrical</b>	<b>6.50%</b>	<b>\$2,367.00</b>
Lighting & Branch Wiring		\$2,367.00
Total Raw Cost	100.00%	\$36,404.64

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$200.23
Force Protection	9.00%	\$3,622.08
General Conditions	10.00%	\$3,640.46
<b>Total Additional Hard Cost</b>		<b>\$7,462.77</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$4,386.74
SIOH Conus	6.50%	\$3,136.52
Design	10.00%	\$4,386.74
08 MYr Inflation Fct	9.93%	\$5,538.70
<b>Total Soft Cost</b>		<b>\$17,448.70</b>
<b>Total Project Cost for Upgrade Renovation</b>		<b>\$61,316.11</b>



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>5.70%</b>	<b>\$53,504.00</b>
Parking Lots		\$11,400.00
Site Earthwork		\$42,104.00
<b>03 Concrete</b>	<b>10.05%</b>	<b>\$94,260.00</b>
Floor Construction		\$32,000.00
Slab on Grade		\$31,130.00
Standard Foundations		\$31,130.00
<b>04 Masonry</b>	<b>6.58%</b>	<b>\$61,691.04</b>
Exterior Walls		\$61,691.04
<b>07 Thermal &amp; Moisture Protection</b>	<b>10.04%</b>	<b>\$94,236.01</b>
Roof Construction		\$17,269.94
Roof Coverings		\$76,966.07
<b>08 Doors &amp; Windows</b>	<b>9.41%</b>	<b>\$88,241.00</b>
Exterior Doors		\$6,165.00
Exterior Windows		\$68,000.00
Interior Doors		\$14,076.00
<b>09 Finishes</b>	<b>11.35%</b>	<b>\$106,438.80</b>
Ceiling Finishes		\$15,958.80
Floor Finishes		\$40,489.29
Partitions		\$28,873.59
Wall Finishes		\$21,117.12
<b>11 Equipment</b>	<b>4.85%</b>	<b>\$45,500.00</b>
Other Equipment		\$45,500.00
<b>13 Special Construction</b>	<b>4.00%</b>	<b>\$37,480.52</b>
Communications & Security		\$16,872.46
Sprinklers		\$20,608.06
<b>15 Mechanical</b>	<b>25.02%</b>	<b>\$234,733.00</b>
Cooling Generating Systems		\$49,808.00
Domestic Water Dist		\$23,400.00
Plumbing Fixtures		\$161,525.00
<b>16 Electrical</b>	<b>6.09%</b>	<b>\$57,101.00</b>
Electrical Service & Distribution		\$54,906.00
Site Lighting		\$2,195.00
<b>19 FF&amp;E</b>	<b>6.93%</b>	<b>\$65,000.00</b>
Interior FF&E allowance		\$65,000.00
Total Raw Cost	100.00%	\$938,185.37

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$5,160.02
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$93,818.54
<b>Total Additional Hard Cost</b>		<b>\$98,978.56</b>

Building 00506

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$51,858.20
SIOH Conus	6.50%	\$70,786.44
Design	10.00%	\$103,716.39
08 MYr Inflation Fct	9.93%	\$125,468.03
<b>Total Soft Cost</b>		<b>\$351,829.05</b>
<b>Total Project Cost for Replacement</b>		<b>\$1,388,992.98</b>

**INSERT BUILDING 506 FLOOR PLANS HERE  
(EXISTING AND RENOVATION PLANS)**



101 Goddard  
Front Entry  
White Sands Missile Range, NM

## Building 12333

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Building 12333, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12333 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12333 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$228,124
• Replacement Cost	\$301,457
• Renovation to Replacement Cost Ratio	75.67%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12333 is not recommended.



101 Goddard  
Rear Face  
White Sands Missile Range, NM

### Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



101 Goddard  
Kitchen  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**101 Goddard  
Entryway  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.



### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



101 Goddard  
Bathroom  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,343 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.45%</b>	<b>\$5,292.21</b>
Built-up Roof: Beyond Useful Life		\$5,292.21
<b>08 Doors &amp; Windows</b>	<b>14.45%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.07%</b>	<b>\$9,289.19</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$792.37
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.08%</b>	<b>\$6,448.88</b>
Fire Alarm System: Missing or Inadequate		\$1,141.55
Fire Sprinklers: Missing or Inadequate		\$5,307.33
<b>15 Mechanical</b>	<b>30.54%</b>	<b>\$21,699.75</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,098.87
Pipe, sewer or waste: Damaged or failing		\$1,486.38
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.38%</b>	<b>\$13,061.90</b>
Branch Circuits: Beyond Expected Useful Life		\$4,211.13
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,571.77
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.04%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$71,057.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$390.81
Force Protection	9.00%	\$7,069.82
General Conditions	10.00%	\$7,105.70
<b>Total Additional Hard Cost</b>		<b>\$14,566.33</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,562.33
SIOH Conus	6.50%	\$6,122.07
Design	10.00%	\$8,562.33

Building 12333

08 MYr Inflation Fct	9.93%	\$10,810.80
<b>Total Soft Cost</b>		<b>\$34,057.53</b>
<b>Total Project</b>		<b>\$119,680.86</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.20%</b>	<b>\$4,334.40</b>
Site Earthwork		\$4,334.40
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.11%</b>	<b>\$5,572.18</b>
Roof Coverings		\$5,572.18
<b>08 Doors &amp; Windows</b>	<b>5.50%</b>	<b>\$7,452.00</b>
Interior Doors		\$7,452.00
<b>09 Finishes</b>	<b>33.40%</b>	<b>\$45,231.08</b>
Ceiling Finishes		\$8,249.85
Floor Finishes		\$10,527.04
Partitions		\$10,099.15
Wall Finishes		\$16,355.04
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>7.75%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>5.97%</b>	<b>\$8,084.86</b>
Communications & Security		\$3,639.53
Sprinklers		\$4,445.33
<b>15 Mechanical</b>	<b>20.39%</b>	<b>\$27,619.00</b>
Cooling Generating Systems		\$10,744.00
Domestic Water Dist		\$8,100.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.43%</b>	<b>\$11,415.50</b>
Electrical Service & Distribution		\$11,415.50
<b>19 FF&amp;E</b>	<b>11.07%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$135,441.67

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$744.93
Force Protection	9.00%	\$13,475.77
General Conditions	10.00%	\$13,544.17
<b>Total Additional Hard Cost</b>		<b>\$27,764.86</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$16,320.65
SIOH Conus	6.50%	\$11,669.27
Design	10.00%	\$16,320.65
08 MYr Inflation Fct	9.93%	\$20,606.45
<b>Total Soft Cost</b>		<b>\$64,917.02</b>

**Total Project Cost for Renovation** **\$228,123.55**

Building 12333

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.36%</b>	<b>\$6,847.25</b>
Site Earthwork		\$6,847.25
<b>03 Concrete</b>	<b>10.94%</b>	<b>\$22,278.50</b>
Floor Construction		\$10,066.25
Slab on Grade		\$5,087.25
Standard Foundations		\$7,125.00
<b>04 Masonry</b>	<b>12.52%</b>	<b>\$25,495.54</b>
Exterior Walls		\$25,495.54
<b>07 Thermal &amp; Moisture Protection</b>	<b>10.35%</b>	<b>\$21,077.71</b>
Roof Construction		\$2,942.02
Roof Coverings		\$18,135.69
<b>08 Doors &amp; Windows</b>	<b>12.43%</b>	<b>\$25,303.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,968.00
<b>09 Finishes</b>	<b>15.86%</b>	<b>\$32,298.49</b>
Ceiling Finishes		\$4,174.38
Floor Finishes		\$10,028.30
Partitions		\$10,710.78
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>5.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.58%</b>	<b>\$7,281.75</b>
Communications & Security		\$2,565.00
Sprinklers		\$4,716.75
<b>15 Mechanical</b>	<b>12.56%</b>	<b>\$25,575.00</b>
Cooling Generating Systems		\$11,400.00
Domestic Water Dist		\$5,400.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.87%</b>	<b>\$11,960.00</b>
Electrical Service & Distribution		\$11,960.00
<b>19 FF&amp;E</b>	<b>7.37%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$203,617.23

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,119.89
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$20,361.72
<b>Total Additional Hard Cost</b>		<b>\$21,481.62</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$11,254.94
SIOH Conus	6.50%	\$15,363.00
Design	10.00%	\$22,509.89
08 MYr Inflation Fct	9.93%	\$27,230.71
<b>Total Soft Cost</b>		<b>\$76,358.53</b>
<b>Total Project Cost for Replacement</b>		<b>\$301,457.38</b>

**INSERT BUILDING 12333 FLOOR PLANS HERE**





103 Goddard  
Front Exterior  
White Sands Missile Range, NM

## Building 12334

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Building 12334, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12334 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12334 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 2 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$259,680
• Replacement Cost	\$343,638
• Renovation to Replacement Cost Ratio	75.57%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12334 is not recommended.



103 Goddard  
Rear Exterior  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	2
15.Renovated to Family Suite	2
16.Delta renovation	3
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



103 Goddard  
Interior, Hallway

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**103 Goddard  
Interior, Bath**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



103 Goddard  
Interior Kitchen

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**

Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**

This facility is a 3 bedroom house, approximately 1,370 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.55%</b>	<b>\$5,396.97</b>
Built-up Roof: Beyond Useful Life		\$5,396.97
<b>08 Doors &amp; Windows</b>	<b>14.36%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.02%</b>	<b>\$9,305.12</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$808.30
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.08%</b>	<b>\$6,489.58</b>
Fire Alarm System: Missing or Inadequate		\$1,164.50
Fire Sprinklers: Missing or Inadequate		\$5,325.08
<b>15 Mechanical</b>	<b>30.45%</b>	<b>\$21,763.89</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,163.01
Pipe, sewer or waste: Damaged or failing		\$1,486.38
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.55%</b>	<b>\$13,261.78</b>
Branch Circuits: Beyond Expected Useful Life		\$4,297.28
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,685.50
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>6.99%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$71,482.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$393.15
Force Protection	9.00%	\$7,112.10
General Conditions	10.00%	\$7,148.20
<b>Total Additional Hard Cost</b>		<b>\$14,653.45</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,613.55
SIOH Conus	6.50%	\$6,158.68
Design	10.00%	\$8,613.55

Building 12334



08 MYr Inflation Fct	9.93%	\$10,875.46
<b>Total Soft Cost</b>		<b>\$34,261.23</b>
<b>Total Project</b>		<b>\$120,396.69</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.94%</b>	<b>\$4,536.00</b>
Site Earthwork		\$4,536.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.68%</b>	<b>\$5,676.28</b>
Roof Coverings		\$5,676.28
<b>08 Doors &amp; Windows</b>	<b>5.10%</b>	<b>\$7,866.00</b>
Interior Doors		\$7,866.00
<b>09 Finishes</b>	<b>32.58%</b>	<b>\$50,236.66</b>
Ceiling Finishes		\$9,166.50
Floor Finishes		\$13,126.24
Partitions		\$10,568.88
Wall Finishes		\$17,375.04
<b>10 Specialties</b>	<b>0.20%</b>	<b>\$310.20</b>
Fittings		\$310.20
<b>11 Equipment</b>	<b>9.08%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>5.35%</b>	<b>\$8,247.40</b>
Communications & Security		\$3,712.70
Sprinklers		\$4,534.70
<b>15 Mechanical</b>	<b>20.53%</b>	<b>\$31,660.00</b>
Cooling Generating Systems		\$10,960.00
Domestic Water Dist		\$9,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>7.55%</b>	<b>\$11,645.00</b>
Electrical Service & Distribution		\$11,645.00
<b>19 FF&amp;E</b>	<b>12.97%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$154,177.54</b>

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$847.98
Force Protection	9.00%	\$15,339.89
General Conditions	10.00%	\$15,417.75
<b>Total Additional Hard Cost</b>		<b>\$31,605.62</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$18,578.32
SIOH Conus	6.50%	\$13,283.50
Design	10.00%	\$18,578.32
08 MYr Inflation Fct	9.93%	\$23,456.97
<b>Total Soft Cost</b>		<b>\$73,897.10</b>

**Total Project Cost for Renovation** **\$259,680.27**

Building 12334

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.27%</b>	<b>\$7,588.25</b>
Site Earthwork		\$7,588.25
<b>03 Concrete</b>	<b>10.27%</b>	<b>\$23,841.62</b>
Floor Construction		\$10,292.45
Slab on Grade		\$5,644.17
Standard Foundations		\$7,905.00
<b>04 Masonry</b>	<b>11.45%</b>	<b>\$26,581.62</b>
Exterior Walls		\$26,581.62
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.97%</b>	<b>\$23,129.64</b>
Roof Construction		\$3,071.04
Roof Coverings		\$20,058.60
<b>08 Doors &amp; Windows</b>	<b>12.80%</b>	<b>\$29,717.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$20,000.00
Interior Doors		\$5,382.00
<b>09 Finishes</b>	<b>15.41%</b>	<b>\$35,770.65</b>
Ceiling Finishes		\$4,631.25
Floor Finishes		\$12,573.85
Partitions		\$11,180.51
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>6.03%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>3.48%</b>	<b>\$8,078.91</b>
Communications & Security		\$2,845.80
Sprinklers		\$5,233.11
<b>15 Mechanical</b>	<b>13.07%</b>	<b>\$30,348.00</b>
Cooling Generating Systems		\$12,648.00
Domestic Water Dist		\$6,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>5.62%</b>	<b>\$13,052.00</b>
Electrical Service & Distribution		\$13,052.00
<b>19 FF&amp;E</b>	<b>8.62%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$232,107.68

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,276.59
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$23,210.77
<b>Total Additional Hard Cost</b>		<b>\$24,487.36</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$12,829.75
SIOH Conus	6.50%	\$17,512.61
Design	10.00%	\$25,659.50
08 MYr Inflation Fct	9.93%	\$31,040.87
<b>Total Soft Cost</b>		<b>\$87,042.74</b>
<b>Total Project Cost for Replacement</b>		<b>\$343,637.79</b>

**INSERT BUILDING 12334 FLOOR PLANS HERE**



105 Goddard  
Entrance  
White Sands Missile Range, NM

## Building 12335

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Building 12335, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12335 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12335 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$216,700
• Replacement Cost	\$281,201
• Renovation to Replacement Cost Ratio	77.06%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12335 is not recommended.



105 Goddard  
Living Room  
White Sands Missile Range, NM

### Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



105 Goddard  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.





**105 Goddard  
Kitchen  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install fire sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



105 Goddard  
Kitchen Floor  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,350 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Meets majority of Functional Criteria.  
Renovation not required.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.47%</b>	<b>\$5,319.37</b>
Built-up Roof: Beyond Useful Life		\$5,319.37
<b>08 Doors &amp; Windows</b>	<b>14.41%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.05%</b>	<b>\$9,293.32</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$796.50
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.12%</b>	<b>\$6,495.75</b>
Fire Alarm System: Missing or Inadequate		\$1,147.50
Fire Sprinklers: Missing or Inadequate		\$5,348.25
<b>15 Mechanical</b>	<b>30.51%</b>	<b>\$21,727.34</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,119.26
Pipe, sewer or waste: Damaged or failing		\$1,493.58
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.41%</b>	<b>\$13,113.83</b>
Branch Circuits: Beyond Expected Useful Life		\$4,232.33
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,602.50
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.02%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$71,214.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$391.68
Force Protection	9.00%	\$7,085.44
General Conditions	10.00%	\$7,121.40
<b>Total Additional Hard Cost</b>		<b>\$14,598.51</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,581.25
SIOH Conus	6.50%	\$6,135.59
Design	10.00%	\$8,581.25

Building 12335

08 MYr Inflation Fct	9.93%	\$10,834.68
<b>Total Soft Cost</b>		<b>\$34,132.78</b>
<b>Total Project</b>		<b>\$119,945.30</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.89%</b>	<b>\$3,712.80</b>
Site Earthwork		\$3,712.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.35%</b>	<b>\$5,595.42</b>
Roof Coverings		\$5,595.42
<b>08 Doors &amp; Windows</b>	<b>5.47%</b>	<b>\$7,038.00</b>
Interior Doors		\$7,038.00
<b>09 Finishes</b>	<b>31.25%</b>	<b>\$40,203.27</b>
Ceiling Finishes		\$7,333.20
Floor Finishes		\$10,080.05
Partitions		\$8,650.82
Wall Finishes		\$14,139.20
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>8.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>6.32%</b>	<b>\$8,127.00</b>
Communications & Security		\$3,658.50
Sprinklers		\$4,468.50
<b>15 Mechanical</b>	<b>20.81%</b>	<b>\$26,775.00</b>
Cooling Generating Systems		\$10,800.00
Domestic Water Dist		\$7,200.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.92%</b>	<b>\$11,475.00</b>
Electrical Service & Distribution		\$11,475.00
<b>19 FF&amp;E</b>	<b>11.66%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$128,659.14

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$707.63
Force Protection	9.00%	\$12,800.94
General Conditions	10.00%	\$12,865.91
<b>Total Additional Hard Cost</b>		<b>\$26,374.48</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$15,503.36
SIOH Conus	6.50%	\$11,084.90
Design	10.00%	\$15,503.36
08 MYr Inflation Fct	9.93%	\$19,574.54
<b>Total Soft Cost</b>		<b>\$61,666.17</b>

**Total Project Cost for Renovation** **\$216,699.79**

Building 12335

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$6,106.25</b>
Site Earthwork		\$6,106.25
<b>03 Concrete</b>	<b>10.91%</b>	<b>\$20,715.38</b>
Floor Construction		\$9,840.05
Slab on Grade		\$4,530.33
Standard Foundations		\$6,345.00
<b>04 Masonry</b>	<b>12.68%</b>	<b>\$24,085.45</b>
Exterior Walls		\$24,085.45
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.88%</b>	<b>\$18,756.97</b>
Roof Construction		\$2,544.19
Roof Coverings		\$16,212.78
<b>08 Doors &amp; Windows</b>	<b>13.10%</b>	<b>\$24,889.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,554.00
<b>09 Finishes</b>	<b>15.16%</b>	<b>\$28,802.66</b>
Ceiling Finishes		\$3,714.60
Floor Finishes		\$9,636.41
Partitions		\$9,262.45
Wall Finishes		\$6,189.20
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.41%</b>	<b>\$6,484.59</b>
Communications & Security		\$2,284.20
Sprinklers		\$4,200.39
<b>15 Mechanical</b>	<b>12.49%</b>	<b>\$23,727.00</b>
Cooling Generating Systems		\$10,152.00
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.72%</b>	<b>\$10,868.00</b>
Electrical Service & Distribution		\$10,868.00
<b>19 FF&amp;E</b>	<b>7.90%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$189,935.30</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,044.64
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$18,993.53
<b>Total Additional Hard Cost</b>		<b>\$20,038.17</b>



**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,498.67
SIOH Conus	6.50%	\$14,330.69
Design	10.00%	\$20,997.35
08 MYr Inflation Fct	9.93%	\$25,400.96
<b>Total Soft Cost</b>		<b>\$71,227.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$281,201.15</b>

**INSERT BUILDING 12335 FLOOR PLANS HERE**



107 Goddard  
Front Exterior  
White Sands Missile Range, NM

## Building 12336

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Building 12336, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12336 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12336 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 2 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$259,680
• Replacement Cost	\$343,638
• Renovation to Replacement Cost Ratio	75.57%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12336 is not recommended.



107 Goddard  
Rear Exterior  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	2
15.Renovated to Family Suite	2
16.Delta renovation	3
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



107 Goddard  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**107 Goddard  
Bathroom  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



107 Goddard  
Kitchen  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**

Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**

This facility is a 3 bedroom house, approximately 1,370 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.



- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.71%</b>	<b>\$5,396.97</b>
Built-up Roof: Beyond Useful Life		\$5,396.97
<b>08 Doors &amp; Windows</b>	<b>14.66%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.29%</b>	<b>\$9,305.12</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$808.30
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.27%</b>	<b>\$6,489.58</b>
Fire Alarm System: Missing or Inadequate		\$1,164.50
Fire Sprinklers: Missing or Inadequate		\$5,325.08
<b>15 Mechanical</b>	<b>28.97%</b>	<b>\$20,277.51</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,163.01
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.95%</b>	<b>\$13,261.78</b>
Branch Circuits: Beyond Expected Useful Life		\$4,297.28
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,685.50
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.14%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$69,996.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$384.98
Force Protection	9.00%	\$6,964.25
General Conditions	10.00%	\$6,999.60
<b>Total Additional Hard Cost</b>		<b>\$14,348.83</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,434.48
SIOH Conus	6.50%	\$6,030.66
Design	10.00%	\$8,434.48
08 MYr Inflation Fct	9.93%	\$10,649.37

Building 12336

<b>Total Soft Cost</b>	<b>\$33,549.00</b>
<b>Total Project</b>	<b>\$117,893.83</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.94%</b>	<b>\$4,536.00</b>
Site Earthwork		\$4,536.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.68%</b>	<b>\$5,676.28</b>
Roof Coverings		\$5,676.28
<b>08 Doors &amp; Windows</b>	<b>5.10%</b>	<b>\$7,866.00</b>
Interior Doors		\$7,866.00
<b>09 Finishes</b>	<b>32.58%</b>	<b>\$50,236.66</b>
Ceiling Finishes		\$9,166.50
Floor Finishes		\$13,126.24
Partitions		\$10,568.88
Wall Finishes		\$17,375.04
<b>10 Specialties</b>	<b>0.20%</b>	<b>\$310.20</b>
Fittings		\$310.20
<b>11 Equipment</b>	<b>9.08%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>5.35%</b>	<b>\$8,247.40</b>
Communications & Security		\$3,712.70
Sprinklers		\$4,534.70
<b>15 Mechanical</b>	<b>20.53%</b>	<b>\$31,660.00</b>
Cooling Generating Systems		\$10,960.00
Domestic Water Dist		\$9,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>7.55%</b>	<b>\$11,645.00</b>
Electrical Service & Distribution		\$11,645.00
<b>19 FF&amp;E</b>	<b>12.97%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$154,177.54

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$847.98
Force Protection	9.00%	\$15,339.89
General Conditions	10.00%	\$15,417.75
<b>Total Additional Hard Cost</b>		<b>\$31,605.62</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$18,578.32
SIOH Conus	6.50%	\$13,283.50
Design	10.00%	\$18,578.32
08 MYr Inflation Fct	9.93%	\$23,456.97
<b>Total Soft Cost</b>		<b>\$73,897.10</b>

**Total Project Cost for Renovation** **\$259,680.27**

Building 12336

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.27%</b>	<b>\$7,588.25</b>
Site Earthwork		\$7,588.25
<b>03 Concrete</b>	<b>10.27%</b>	<b>\$23,841.62</b>
Floor Construction		\$10,292.45
Slab on Grade		\$5,644.17
Standard Foundations		\$7,905.00
<b>04 Masonry</b>	<b>11.45%</b>	<b>\$26,581.62</b>
Exterior Walls		\$26,581.62
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.97%</b>	<b>\$23,129.64</b>
Roof Construction		\$3,071.04
Roof Coverings		\$20,058.60
<b>08 Doors &amp; Windows</b>	<b>12.80%</b>	<b>\$29,717.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$20,000.00
Interior Doors		\$5,382.00
<b>09 Finishes</b>	<b>15.41%</b>	<b>\$35,770.65</b>
Ceiling Finishes		\$4,631.25
Floor Finishes		\$12,573.85
Partitions		\$11,180.51
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>6.03%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>3.48%</b>	<b>\$8,078.91</b>
Communications & Security		\$2,845.80
Sprinklers		\$5,233.11
<b>15 Mechanical</b>	<b>13.07%</b>	<b>\$30,348.00</b>
Cooling Generating Systems		\$12,648.00
Domestic Water Dist		\$6,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>5.62%</b>	<b>\$13,052.00</b>
Electrical Service & Distribution		\$13,052.00
<b>19 FF&amp;E</b>	<b>8.62%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$232,107.68

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,276.59
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$23,210.77
<b>Total Additional Hard Cost</b>		<b>\$24,487.36</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$12,829.75
SIOH Conus	6.50%	\$17,512.61
Design	10.00%	\$25,659.50
08 MYr Inflation Fct	9.93%	\$31,040.87
<b>Total Soft Cost</b>		<b>\$87,042.74</b>
<b>Total Project Cost for Replacement</b>		<b>\$343,637.79</b>

**INSERT BUILDING 12336 FLOOR PLANS HERE**



109 Goddard  
Front View  
White Sands Missile Range, NM

## Building 12337

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Building 12337, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12337 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12337 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$216,700
• Replacement Cost	\$281,201
• Renovation to Replacement Cost Ratio	77.06%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12337 is not recommended.





109 Goddard  
Entrance  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



109 Goddard  
Living Room  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs. Most of the hard and soft good were replaced in the 2002 renovation.

- Recommendation: No corrective action required.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.

- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.

- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.

- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.

- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been re-painted and is in fair to good condition.

- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.

- Recommendation: No corrective action required.



**109 Goddard  
Hallway  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install fire sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



109 Goddard  
Kitchen  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,350 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>8.03%</b>	<b>\$5,319.37</b>
Built-up Roof: Beyond Useful Life		\$5,319.37
<b>08 Doors &amp; Windows</b>	<b>15.49%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>14.03%</b>	<b>\$9,293.32</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$796.50
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.83%</b>	<b>\$6,513.50</b>
Fire Alarm System: Missing or Inadequate		\$1,147.50
Fire Sprinklers: Missing or Inadequate		\$5,366.00
<b>15 Mechanical</b>	<b>32.82%</b>	<b>\$21,746.59</b>
Bath tub: Replace due to remodel		\$3,169.40
Domestic water system: Beyond expected useful life		\$3,112.92
Pipe, sewer or waste: Damaged or failing		\$1,519.17
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>19.79%</b>	<b>\$13,113.83</b>
Branch Circuits: Beyond Expected Useful Life		\$4,232.33
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,602.50
Main service: Beyond expected useful life		\$2,374.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$66,251.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$364.38
Force Protection	9.00%	\$6,591.64
General Conditions	10.00%	\$6,625.10
<b>Total Additional Hard Cost</b>		<b>\$13,581.12</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,983.21
SIOH Conus	6.50%	\$5,708.00
Design	10.00%	\$7,983.21
08 MYr Inflation Fct	9.93%	\$10,079.60
<b>Total Soft Cost</b>		<b>\$31,754.02</b>

Building 12337

**Total Project**

**\$111,586.15**



## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.89%</b>	<b>\$3,712.80</b>
Site Earthwork		\$3,712.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.35%</b>	<b>\$5,595.42</b>
Roof Coverings		\$5,595.42
<b>08 Doors &amp; Windows</b>	<b>5.47%</b>	<b>\$7,038.00</b>
Interior Doors		\$7,038.00
<b>09 Finishes</b>	<b>31.25%</b>	<b>\$40,203.27</b>
Ceiling Finishes		\$7,333.20
Floor Finishes		\$10,080.05
Partitions		\$8,650.82
Wall Finishes		\$14,139.20
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>8.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>6.32%</b>	<b>\$8,127.00</b>
Communications & Security		\$3,658.50
Sprinklers		\$4,468.50
<b>15 Mechanical</b>	<b>20.81%</b>	<b>\$26,775.00</b>
Cooling Generating Systems		\$10,800.00
Domestic Water Dist		\$7,200.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.92%</b>	<b>\$11,475.00</b>
Electrical Service & Distribution		\$11,475.00
<b>19 FF&amp;E</b>	<b>11.66%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$128,659.14

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$707.63
Force Protection	9.00%	\$12,800.94
General Conditions	10.00%	\$12,865.91
<b>Total Additional Hard Cost</b>		<b>\$26,374.48</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$15,503.36
SIOH Conus	6.50%	\$11,084.90
Design	10.00%	\$15,503.36
08 MYr Inflation Fct	9.93%	\$19,574.54
<b>Total Soft Cost</b>		<b>\$61,666.17</b>

**Total Project Cost for Renovation** **\$216,699.79**

*Building 12337*

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$6,106.25</b>
Site Earthwork		\$6,106.25
<b>03 Concrete</b>	<b>10.91%</b>	<b>\$20,715.38</b>
Floor Construction		\$9,840.05
Slab on Grade		\$4,530.33
Standard Foundations		\$6,345.00
<b>04 Masonry</b>	<b>12.68%</b>	<b>\$24,085.45</b>
Exterior Walls		\$24,085.45
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.88%</b>	<b>\$18,756.97</b>
Roof Construction		\$2,544.19
Roof Coverings		\$16,212.78
<b>08 Doors &amp; Windows</b>	<b>13.10%</b>	<b>\$24,889.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,554.00
<b>09 Finishes</b>	<b>15.16%</b>	<b>\$28,802.66</b>
Ceiling Finishes		\$3,714.60
Floor Finishes		\$9,636.41
Partitions		\$9,262.45
Wall Finishes		\$6,189.20
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.41%</b>	<b>\$6,484.59</b>
Communications & Security		\$2,284.20
Sprinklers		\$4,200.39
<b>15 Mechanical</b>	<b>12.49%</b>	<b>\$23,727.00</b>
Cooling Generating Systems		\$10,152.00
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.72%</b>	<b>\$10,868.00</b>
Electrical Service & Distribution		\$10,868.00
<b>19 FF&amp;E</b>	<b>7.90%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$189,935.30</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,044.64
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$18,993.53
<b>Total Additional Hard Cost</b>		<b>\$20,038.17</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,498.67
SIOH Conus	6.50%	\$14,330.69
Design	10.00%	\$20,997.35
08 MYr Inflation Fct	9.93%	\$25,400.96
<b>Total Soft Cost</b>		<b>\$71,227.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$281,201.15</b>

**INSERT BUILDING 12337 FLOOR PLANS HERE**



100 Goddard  
Front View  
White Sands Missile Range, NM

## Building 12342

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Building 12342, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12342 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12342 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$216,700
• Replacement Cost	\$281,201
• Renovation to Replacement Cost Ratio	77.06%

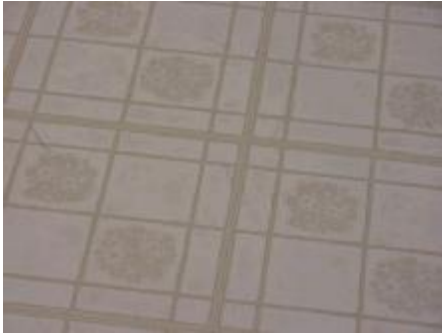
Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12342 is not recommended.



100 Goddard  
Entrance  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



100 Goddard  
Kitchen Floor  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**100 Goddard  
Patio Door  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.



## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install fire sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



100 Goddard  
Ceiling Damage  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**

Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**

This facility is a 3 bedroom house, approximately 1,350 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>8.11%</b>	<b>\$5,319.37</b>
Built-up Roof: Beyond Useful Life		\$5,319.37
<b>08 Doors &amp; Windows</b>	<b>15.65%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>14.17%</b>	<b>\$9,293.32</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$796.50
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.90%</b>	<b>\$6,495.75</b>
Fire Alarm System: Missing or Inadequate		\$1,147.50
Fire Sprinklers: Missing or Inadequate		\$5,348.25
<b>15 Mechanical</b>	<b>33.11%</b>	<b>\$21,720.91</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,112.92
Pipe, sewer or waste: Damaged or failing		\$1,493.49
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>11.45%</b>	<b>\$7,511.33</b>
Branch Circuits: Beyond Expected Useful Life		\$4,232.33
Emergency Light: Missing or inadequate		\$905.00
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.62%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$65,605.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$360.83
Force Protection	9.00%	\$6,527.37
General Conditions	10.00%	\$6,560.50
<b>Total Additional Hard Cost</b>		<b>\$13,448.70</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,905.37
SIOH Conus	6.50%	\$5,652.34
Design	10.00%	\$7,905.37
08 MYr Inflation Fct	9.93%	\$9,981.32

Building 12342

Total Soft Cost	\$31,444.39
Total Project	\$110,498.09

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.89%</b>	<b>\$3,712.80</b>
Site Earthwork		\$3,712.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.35%</b>	<b>\$5,595.42</b>
Roof Coverings		\$5,595.42
<b>08 Doors &amp; Windows</b>	<b>5.47%</b>	<b>\$7,038.00</b>
Interior Doors		\$7,038.00
<b>09 Finishes</b>	<b>31.25%</b>	<b>\$40,203.27</b>
Ceiling Finishes		\$7,333.20
Floor Finishes		\$10,080.05
Partitions		\$8,650.82
Wall Finishes		\$14,139.20
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>8.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>6.32%</b>	<b>\$8,127.00</b>
Communications & Security		\$3,658.50
Sprinklers		\$4,468.50
<b>15 Mechanical</b>	<b>20.81%</b>	<b>\$26,775.00</b>
Cooling Generating Systems		\$10,800.00
Domestic Water Dist		\$7,200.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.92%</b>	<b>\$11,475.00</b>
Electrical Service & Distribution		\$11,475.00
<b>19 FF&amp;E</b>	<b>11.66%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$128,659.14

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$707.63
Force Protection	9.00%	\$12,800.94
General Conditions	10.00%	\$12,865.91
<b>Total Additional Hard Cost</b>		<b>\$26,374.48</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$15,503.36
SIOH Conus	6.50%	\$11,084.90
Design	10.00%	\$15,503.36
08 MYr Inflation Fct	9.93%	\$19,574.54
<b>Total Soft Cost</b>		<b>\$61,666.17</b>

**Total Project Cost for Renovation** **\$216,699.79**

Building 12342

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$6,106.25</b>
Site Earthwork		\$6,106.25
<b>03 Concrete</b>	<b>10.91%</b>	<b>\$20,715.38</b>
Floor Construction		\$9,840.05
Slab on Grade		\$4,530.33
Standard Foundations		\$6,345.00
<b>04 Masonry</b>	<b>12.68%</b>	<b>\$24,085.45</b>
Exterior Walls		\$24,085.45
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.88%</b>	<b>\$18,756.97</b>
Roof Construction		\$2,544.19
Roof Coverings		\$16,212.78
<b>08 Doors &amp; Windows</b>	<b>13.10%</b>	<b>\$24,889.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,554.00
<b>09 Finishes</b>	<b>15.16%</b>	<b>\$28,802.66</b>
Ceiling Finishes		\$3,714.60
Floor Finishes		\$9,636.41
Partitions		\$9,262.45
Wall Finishes		\$6,189.20
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.41%</b>	<b>\$6,484.59</b>
Communications & Security		\$2,284.20
Sprinklers		\$4,200.39
<b>15 Mechanical</b>	<b>12.49%</b>	<b>\$23,727.00</b>
Cooling Generating Systems		\$10,152.00
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.72%</b>	<b>\$10,868.00</b>
Electrical Service & Distribution		\$10,868.00
<b>19 FF&amp;E</b>	<b>7.90%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$189,935.30</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,044.64
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$18,993.53
<b>Total Additional Hard Cost</b>		<b>\$20,038.17</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,498.67
SIOH Conus	6.50%	\$14,330.69
Design	10.00%	\$20,997.35
08 MYr Inflation Fct	9.93%	\$25,400.96
<b>Total Soft Cost</b>		<b>\$71,227.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$281,201.15</b>



**INSERT BUILDING 12342 FLOOR PLANS HERE**



102 Goddard  
Entrance  
White Sands Missile Range, NM

## Building 12343

---

Building 12343, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12343 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12343 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 0 extended stay rooms and 3 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$228,124
• Replacement Cost	\$301,457
• Renovation to Replacement Cost Ratio	75.67%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12343 is not recommended.



102 Goddard  
Exterior View  
white Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	3
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



102 Goddard  
Single House Air Supply Duct  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been re-painted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**102 Goddard**  
**Interior Brick Wall**  
**White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



102 Goddard  
Patio Door Damage  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

#### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,343 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.



## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.45%</b>	<b>\$5,292.21</b>
Built-up Roof: Beyond Useful Life		\$5,292.21
<b>08 Doors &amp; Windows</b>	<b>14.45%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.07%</b>	<b>\$9,289.19</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$792.37
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.08%</b>	<b>\$6,448.88</b>
Fire Alarm System: Missing or Inadequate		\$1,141.55
Fire Sprinklers: Missing or Inadequate		\$5,307.33
<b>15 Mechanical</b>	<b>30.54%</b>	<b>\$21,699.75</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,098.87
Pipe, sewer or waste: Damaged or failing		\$1,486.38
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.38%</b>	<b>\$13,061.90</b>
Branch Circuits: Beyond Expected Useful Life		\$4,211.13
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,571.77
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.04%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$71,057.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$390.81
Force Protection	9.00%	\$7,069.82
General Conditions	10.00%	\$7,105.70
<b>Total Additional Hard Cost</b>		<b>\$14,566.33</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,562.33
SIOH Conus	6.50%	\$6,122.07
Design	10.00%	\$8,562.33

Building 12343

08 MYr Inflation Fct	9.93%	\$10,810.80
<b>Total Soft Cost</b>		<b>\$34,057.53</b>
<b>Total Project</b>		<b>\$119,680.86</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.20%</b>	<b>\$4,334.40</b>
Site Earthwork		\$4,334.40
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.11%</b>	<b>\$5,572.18</b>
Roof Coverings		\$5,572.18
<b>08 Doors &amp; Windows</b>	<b>5.50%</b>	<b>\$7,452.00</b>
Interior Doors		\$7,452.00
<b>09 Finishes</b>	<b>33.40%</b>	<b>\$45,231.08</b>
Ceiling Finishes		\$8,249.85
Floor Finishes		\$10,527.04
Partitions		\$10,099.15
Wall Finishes		\$16,355.04
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>7.75%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>5.97%</b>	<b>\$8,084.86</b>
Communications & Security		\$3,639.53
Sprinklers		\$4,445.33
<b>15 Mechanical</b>	<b>20.39%</b>	<b>\$27,619.00</b>
Cooling Generating Systems		\$10,744.00
Domestic Water Dist		\$8,100.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.43%</b>	<b>\$11,415.50</b>
Electrical Service & Distribution		\$11,415.50
<b>19 FF&amp;E</b>	<b>11.07%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$135,441.67</b>

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$744.93
Force Protection	9.00%	\$13,475.77
General Conditions	10.00%	\$13,544.17
<b>Total Additional Hard Cost</b>		<b>\$27,764.86</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$16,320.65
SIOH Conus	6.50%	\$11,669.27
Design	10.00%	\$16,320.65
08 MYr Inflation Fct	9.93%	\$20,606.45
<b>Total Soft Cost</b>		<b>\$64,917.02</b>

**Total Project Cost for Renovation** **\$228,123.55**

*Building 12343*

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.36%</b>	<b>\$6,847.25</b>
Site Earthwork		\$6,847.25
<b>03 Concrete</b>	<b>10.94%</b>	<b>\$22,278.50</b>
Floor Construction		\$10,066.25
Slab on Grade		\$5,087.25
Standard Foundations		\$7,125.00
<b>04 Masonry</b>	<b>12.52%</b>	<b>\$25,495.54</b>
Exterior Walls		\$25,495.54
<b>07 Thermal &amp; Moisture Protection</b>	<b>10.35%</b>	<b>\$21,077.71</b>
Roof Construction		\$2,942.02
Roof Coverings		\$18,135.69
<b>08 Doors &amp; Windows</b>	<b>12.43%</b>	<b>\$25,303.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,968.00
<b>09 Finishes</b>	<b>15.86%</b>	<b>\$32,298.49</b>
Ceiling Finishes		\$4,174.38
Floor Finishes		\$10,028.30
Partitions		\$10,710.78
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>5.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.58%</b>	<b>\$7,281.75</b>
Communications & Security		\$2,565.00
Sprinklers		\$4,716.75
<b>15 Mechanical</b>	<b>12.56%</b>	<b>\$25,575.00</b>
Cooling Generating Systems		\$11,400.00
Domestic Water Dist		\$5,400.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.87%</b>	<b>\$11,960.00</b>
Electrical Service & Distribution		\$11,960.00
<b>19 FF&amp;E</b>	<b>7.37%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$203,617.23

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,119.89
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$20,361.72
<b>Total Additional Hard Cost</b>		<b>\$21,481.62</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$11,254.94
SIOH Conus	6.50%	\$15,363.00
Design	10.00%	\$22,509.89
08 MYr Inflation Fct	9.93%	\$27,230.71
<b>Total Soft Cost</b>		<b>\$76,358.53</b>
<b>Total Project Cost for Replacement</b>		<b>\$301,457.38</b>

**INSERT BUILDING 12343 FLOOR PLANS HERE**



104 Goddard  
Front Exterior  
White Sands Missile Range, NM

## Building 12344

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Building 12344, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12344 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12344 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 2 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$259,680
• Replacement Cost	\$343,638
• Renovation to Replacement Cost Ratio	75.57%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12344 is not recommended.



104 Goddard  
Rear Exterior  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	2
15.Renovated to Family Suite	2
16.Delta renovation	3
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes





104 Goddard  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**104 Goddard  
Bathroom  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



104 Goddard  
Kitchen  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**

Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**

This facility is a 3 bedroom house, approximately 1,370 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>8.39%</b>	<b>\$5,396.97</b>
Built-up Roof: Beyond Useful Life		\$5,396.97
<b>08 Doors &amp; Windows</b>	<b>15.96%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>14.47%</b>	<b>\$9,305.12</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$808.30
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>10.09%</b>	<b>\$6,489.58</b>
Fire Alarm System: Missing or Inadequate		\$1,164.50
Fire Sprinklers: Missing or Inadequate		\$5,325.08
<b>15 Mechanical</b>	<b>31.53%</b>	<b>\$20,277.51</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,163.01
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>11.78%</b>	<b>\$7,576.28</b>
Branch Circuits: Beyond Expected Useful Life		\$4,297.28
Emergency Light: Missing or inadequate		\$905.00
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.77%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$64,310.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$353.71
Force Protection	9.00%	\$6,398.52
General Conditions	10.00%	\$6,431.00
<b>Total Additional Hard Cost</b>		<b>\$13,183.23</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,749.32
SIOH Conus	6.50%	\$5,540.77
Design	10.00%	\$7,749.32
08 MYr Inflation Fct	9.93%	\$9,784.29
<b>Total Soft Cost</b>		<b>\$30,823.70</b>

*Building 12344*

**Total Project**

**\$108,316.93**

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.94%</b>	<b>\$4,536.00</b>
Site Earthwork		\$4,536.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.68%</b>	<b>\$5,676.28</b>
Roof Coverings		\$5,676.28
<b>08 Doors &amp; Windows</b>	<b>5.10%</b>	<b>\$7,866.00</b>
Interior Doors		\$7,866.00
<b>09 Finishes</b>	<b>32.58%</b>	<b>\$50,236.66</b>
Ceiling Finishes		\$9,166.50
Floor Finishes		\$13,126.24
Partitions		\$10,568.88
Wall Finishes		\$17,375.04
<b>10 Specialties</b>	<b>0.20%</b>	<b>\$310.20</b>
Fittings		\$310.20
<b>11 Equipment</b>	<b>9.08%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>5.35%</b>	<b>\$8,247.40</b>
Communications & Security		\$3,712.70
Sprinklers		\$4,534.70
<b>15 Mechanical</b>	<b>20.53%</b>	<b>\$31,660.00</b>
Cooling Generating Systems		\$10,960.00
Domestic Water Dist		\$9,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>7.55%</b>	<b>\$11,645.00</b>
Electrical Service & Distribution		\$11,645.00
<b>19 FF&amp;E</b>	<b>12.97%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$154,177.54</b>

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$847.98
Force Protection	9.00%	\$15,339.89
General Conditions	10.00%	\$15,417.75
<b>Total Additional Hard Cost</b>		<b>\$31,605.62</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$18,578.32
SIOH Conus	6.50%	\$13,283.50
Design	10.00%	\$18,578.32
08 MYr Inflation Fct	9.93%	\$23,456.97
<b>Total Soft Cost</b>		<b>\$73,897.10</b>

**Total Project Cost for Renovation** **\$259,680.27**

*Building 12344*



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.27%</b>	<b>\$7,588.25</b>
Site Earthwork		\$7,588.25
<b>03 Concrete</b>	<b>10.27%</b>	<b>\$23,841.62</b>
Floor Construction		\$10,292.45
Slab on Grade		\$5,644.17
Standard Foundations		\$7,905.00
<b>04 Masonry</b>	<b>11.45%</b>	<b>\$26,581.62</b>
Exterior Walls		\$26,581.62
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.97%</b>	<b>\$23,129.64</b>
Roof Construction		\$3,071.04
Roof Coverings		\$20,058.60
<b>08 Doors &amp; Windows</b>	<b>12.80%</b>	<b>\$29,717.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$20,000.00
Interior Doors		\$5,382.00
<b>09 Finishes</b>	<b>15.41%</b>	<b>\$35,770.65</b>
Ceiling Finishes		\$4,631.25
Floor Finishes		\$12,573.85
Partitions		\$11,180.51
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>6.03%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>3.48%</b>	<b>\$8,078.91</b>
Communications & Security		\$2,845.80
Sprinklers		\$5,233.11
<b>15 Mechanical</b>	<b>13.07%</b>	<b>\$30,348.00</b>
Cooling Generating Systems		\$12,648.00
Domestic Water Dist		\$6,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>5.62%</b>	<b>\$13,052.00</b>
Electrical Service & Distribution		\$13,052.00
<b>19 FF&amp;E</b>	<b>8.62%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$232,107.68

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,276.59
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$23,210.77
<b>Total Additional Hard Cost</b>		<b>\$24,487.36</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$12,829.75
SIOH Conus	6.50%	\$17,512.61
Design	10.00%	\$25,659.50
08 MYr Inflation Fct	9.93%	\$31,040.87
<b>Total Soft Cost</b>		<b>\$87,042.74</b>
<b>Total Project Cost for Replacement</b>		<b>\$343,637.79</b>

**INSERT BUILDING 12344 FLOOR PLANS HERE**



106 Goddard  
Entrance  
White Sands Missile Range, NM

## Building 12345

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Building 12345, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12345 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12345 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$216,700
• Replacement Cost	\$281,201
• Renovation to Replacement Cost Ratio	77.06%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12345 is not recommended.



106 Goddard  
Front View  
White Sands Missile Range, NM

Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



106 Goddard  
Return Air Duct  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs. Most of the hard and soft good were replaced in the 2002 renovation.

- Recommendation: No corrective action required.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.

- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.

- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.

- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.

- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.

- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.

- Recommendation: No corrective action required.



**106 Goddard**  
**Wooden Blinds**  
**White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install fire sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.



### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



106 Goddard  
Ceiling Fan  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,350 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>8.78%</b>	<b>\$5,319.37</b>
Built-up Roof: Beyond Useful Life		\$5,319.37
<b>08 Doors &amp; Windows</b>	<b>16.94%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>15.33%</b>	<b>\$9,293.32</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$796.50
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>10.72%</b>	<b>\$6,495.75</b>
Fire Alarm System: Missing or Inadequate		\$1,147.50
Fire Sprinklers: Missing or Inadequate		\$5,348.25
<b>15 Mechanical</b>	<b>35.85%</b>	<b>\$21,727.34</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,119.26
Pipe, sewer or waste: Damaged or failing		\$1,493.58
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>12.39%</b>	<b>\$7,511.33</b>
Branch Circuits: Beyond Expected Useful Life		\$4,232.33
Emergency Light: Missing or inadequate		\$905.00
Main service: Beyond expected useful life		\$2,374.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$60,612.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$333.37
Force Protection	9.00%	\$6,030.59
General Conditions	10.00%	\$6,061.20
<b>Total Additional Hard Cost</b>		<b>\$12,425.16</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,303.72
SIOH Conus	6.50%	\$5,222.16
Design	10.00%	\$7,303.72
08 MYr Inflation Fct	9.93%	\$9,221.67
<b>Total Soft Cost</b>		<b>\$29,051.26</b>

**Total Project** **\$102,088.41**

Building 12345

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.89%</b>	<b>\$3,712.80</b>
Site Earthwork		\$3,712.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.35%</b>	<b>\$5,595.42</b>
Roof Coverings		\$5,595.42
<b>08 Doors &amp; Windows</b>	<b>5.47%</b>	<b>\$7,038.00</b>
Interior Doors		\$7,038.00
<b>09 Finishes</b>	<b>31.25%</b>	<b>\$40,203.27</b>
Ceiling Finishes		\$7,333.20
Floor Finishes		\$10,080.05
Partitions		\$8,650.82
Wall Finishes		\$14,139.20
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>8.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>6.32%</b>	<b>\$8,127.00</b>
Communications & Security		\$3,658.50
Sprinklers		\$4,468.50
<b>15 Mechanical</b>	<b>20.81%</b>	<b>\$26,775.00</b>
Cooling Generating Systems		\$10,800.00
Domestic Water Dist		\$7,200.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.92%</b>	<b>\$11,475.00</b>
Electrical Service & Distribution		\$11,475.00
<b>19 FF&amp;E</b>	<b>11.66%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$128,659.14

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$707.63
Force Protection	9.00%	\$12,800.94
General Conditions	10.00%	\$12,865.91
<b>Total Additional Hard Cost</b>		<b>\$26,374.48</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$15,503.36
SIOH Conus	6.50%	\$11,084.90
Design	10.00%	\$15,503.36
08 MYr Inflation Fct	9.93%	\$19,574.54
<b>Total Soft Cost</b>		<b>\$61,666.17</b>

**Total Project Cost for Renovation** **\$216,699.79**

*Building 12345*

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$6,106.25</b>
Site Earthwork		\$6,106.25
<b>03 Concrete</b>	<b>10.91%</b>	<b>\$20,715.38</b>
Floor Construction		\$9,840.05
Slab on Grade		\$4,530.33
Standard Foundations		\$6,345.00
<b>04 Masonry</b>	<b>12.68%</b>	<b>\$24,085.45</b>
Exterior Walls		\$24,085.45
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.88%</b>	<b>\$18,756.97</b>
Roof Construction		\$2,544.19
Roof Coverings		\$16,212.78
<b>08 Doors &amp; Windows</b>	<b>13.10%</b>	<b>\$24,889.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,554.00
<b>09 Finishes</b>	<b>15.16%</b>	<b>\$28,802.66</b>
Ceiling Finishes		\$3,714.60
Floor Finishes		\$9,636.41
Partitions		\$9,262.45
Wall Finishes		\$6,189.20
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.41%</b>	<b>\$6,484.59</b>
Communications & Security		\$2,284.20
Sprinklers		\$4,200.39
<b>15 Mechanical</b>	<b>12.49%</b>	<b>\$23,727.00</b>
Cooling Generating Systems		\$10,152.00
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.72%</b>	<b>\$10,868.00</b>
Electrical Service & Distribution		\$10,868.00
<b>19 FF&amp;E</b>	<b>7.90%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$189,935.30</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,044.64
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$18,993.53
<b>Total Additional Hard Cost</b>		<b>\$20,038.17</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,498.67
SIOH Conus	6.50%	\$14,330.69
Design	10.00%	\$20,997.35
08 MYr Inflation Fct	9.93%	\$25,400.96
<b>Total Soft Cost</b>		<b>\$71,227.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$281,201.15</b>

**INSERT BUILDING 12345 FLOOR PLANS HERE**



108 Goddard  
Front Exterior  
White Sands Missile Range, NM

## Building 12346

---

Building 12346, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12346 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12346 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 2 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$259,680
• Replacement Cost	\$343,638
• Renovation to Replacement Cost Ratio	75.57%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12346 is not recommended.





108 Goddard  
Rear Exterior  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	2
15.Renovated to Family Suite	2
16.Delta renovation	3
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



108 Goddard  
Hallway  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs. Most of the hard and soft good were replaced in the 2002 renovation.
- Recommendation: No corrective action required.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been re-painted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**108 Goddard  
Bathroom  
White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



108 Goddard  
Kitchen  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,370 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.10%</b>	<b>\$5,396.97</b>
Built-up Roof: Beyond Useful Life		\$5,396.97
<b>08 Doors &amp; Windows</b>	<b>17.31%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>15.69%</b>	<b>\$9,305.12</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$808.30
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>10.94%</b>	<b>\$6,489.58</b>
Fire Alarm System: Missing or Inadequate		\$1,164.50
Fire Sprinklers: Missing or Inadequate		\$5,325.08
<b>15 Mechanical</b>	<b>34.19%</b>	<b>\$20,277.51</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,163.01
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>12.77%</b>	<b>\$7,576.28</b>
Branch Circuits: Beyond Expected Useful Life		\$4,297.28
Emergency Light: Missing or inadequate		\$905.00
Main service: Beyond expected useful life		\$2,374.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$59,310.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$326.21
Force Protection	9.00%	\$5,901.05
General Conditions	10.00%	\$5,931.00
<b>Total Additional Hard Cost</b>		<b>\$12,158.25</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,146.83
SIOH Conus	6.50%	\$5,109.98
Design	10.00%	\$7,146.83
08 MYr Inflation Fct	9.93%	\$9,023.58
<b>Total Soft Cost</b>		<b>\$28,427.21</b>
<b>Total Project</b>		<b>\$99,895.46</b>

Building 12346

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.94%</b>	<b>\$4,536.00</b>
Site Earthwork		\$4,536.00
<b>07 Thermal &amp; Moisture Protection</b>	<b>3.68%</b>	<b>\$5,676.28</b>
Roof Coverings		\$5,676.28
<b>08 Doors &amp; Windows</b>	<b>5.10%</b>	<b>\$7,866.00</b>
Interior Doors		\$7,866.00
<b>09 Finishes</b>	<b>32.58%</b>	<b>\$50,236.66</b>
Ceiling Finishes		\$9,166.50
Floor Finishes		\$13,126.24
Partitions		\$10,568.88
Wall Finishes		\$17,375.04
<b>10 Specialties</b>	<b>0.20%</b>	<b>\$310.20</b>
Fittings		\$310.20
<b>11 Equipment</b>	<b>9.08%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>5.35%</b>	<b>\$8,247.40</b>
Communications & Security		\$3,712.70
Sprinklers		\$4,534.70
<b>15 Mechanical</b>	<b>20.53%</b>	<b>\$31,660.00</b>
Cooling Generating Systems		\$10,960.00
Domestic Water Dist		\$9,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>7.55%</b>	<b>\$11,645.00</b>
Electrical Service & Distribution		\$11,645.00
<b>19 FF&amp;E</b>	<b>12.97%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$154,177.54</b>

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$847.98
Force Protection	9.00%	\$15,339.89
General Conditions	10.00%	\$15,417.75
<b>Total Additional Hard Cost</b>		<b>\$31,605.62</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$18,578.32
SIOH Conus	6.50%	\$13,283.50
Design	10.00%	\$18,578.32
08 MYr Inflation Fct	9.93%	\$23,456.97
<b>Total Soft Cost</b>		<b>\$73,897.10</b>

**Total Project Cost for Renovation** **\$259,680.27**

Building 12346



## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.27%</b>	<b>\$7,588.25</b>
Site Earthwork		\$7,588.25
<b>03 Concrete</b>	<b>10.27%</b>	<b>\$23,841.62</b>
Floor Construction		\$10,292.45
Slab on Grade		\$5,644.17
Standard Foundations		\$7,905.00
<b>04 Masonry</b>	<b>11.45%</b>	<b>\$26,581.62</b>
Exterior Walls		\$26,581.62
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.97%</b>	<b>\$23,129.64</b>
Roof Construction		\$3,071.04
Roof Coverings		\$20,058.60
<b>08 Doors &amp; Windows</b>	<b>12.80%</b>	<b>\$29,717.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$20,000.00
Interior Doors		\$5,382.00
<b>09 Finishes</b>	<b>15.41%</b>	<b>\$35,770.65</b>
Ceiling Finishes		\$4,631.25
Floor Finishes		\$12,573.85
Partitions		\$11,180.51
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>6.03%</b>	<b>\$14,000.00</b>
Other Equipment		\$14,000.00
<b>13 Special Construction</b>	<b>3.48%</b>	<b>\$8,078.91</b>
Communications & Security		\$2,845.80
Sprinklers		\$5,233.11
<b>15 Mechanical</b>	<b>13.07%</b>	<b>\$30,348.00</b>
Cooling Generating Systems		\$12,648.00
Domestic Water Dist		\$6,000.00
Plumbing Fixtures		\$11,700.00
<b>16 Electrical</b>	<b>5.62%</b>	<b>\$13,052.00</b>
Electrical Service & Distribution		\$13,052.00
<b>19 FF&amp;E</b>	<b>8.62%</b>	<b>\$20,000.00</b>
Interior FF&E allowance		\$20,000.00
Total Raw Cost	100.00%	\$232,107.68

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,276.59
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$23,210.77
<b>Total Additional Hard Cost</b>		<b>\$24,487.36</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$12,829.75
SIOH Conus	6.50%	\$17,512.61
Design	10.00%	\$25,659.50
08 MYr Inflation Fct	9.93%	\$31,040.87
<b>Total Soft Cost</b>		<b>\$87,042.74</b>
<b>Total Project Cost for Replacement</b>		<b>\$343,637.79</b>

**INSERT BUILDING 12346 FLOOR PLANS HERE**



110 Goddard  
Entrance  
White Sands Missile Range, NM

## Building 12347

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Building 12347, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 1996, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12347 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12347 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

## Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 0 extended stay rooms and 3 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

## Cost Analysis

• Renovation Cost	\$228,124
• Replacement Cost	\$301,457
• Renovation to Replacement Cost Ratio	75.67%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12347 is not recommended.



110 Goddard  
Side View  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	1
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	0
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	0
15.Renovated to Family Suite	3
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



110 Goddard  
Floor by Patio Door  
White Sands Missile Range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs.
- Recommendation: Replace all hard and soft goods in guest rooms.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.
- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.
- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.
- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.
- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.
- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.
- Recommendation: No corrective action required.



**110 Goddard**  
**Wall Finish**  
**White Sands Missile Range, NM**

#### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

#### **Roofing**

##### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

#### **Interior Construction**

##### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

##### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

#### **Interior Finishes**

##### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

##### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

##### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install an NFPA code approved fire sprinkler system for residential occupancy.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.



### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



110 Goddard  
Hallway  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**

Meets majority of Functional Criteria.  
Renovation not required.

- **Housekeeping Rooms**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**

This facility is a 3 bedroom house, approximately 1,343 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**

Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>7.45%</b>	<b>\$5,292.21</b>
Built-up Roof: Beyond Useful Life		\$5,292.21
<b>08 Doors &amp; Windows</b>	<b>14.44%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>13.07%</b>	<b>\$9,289.19</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$792.37
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>9.10%</b>	<b>\$6,466.63</b>
Fire Alarm System: Missing or Inadequate		\$1,141.55
Fire Sprinklers: Missing or Inadequate		\$5,325.08
<b>15 Mechanical</b>	<b>30.53%</b>	<b>\$21,699.75</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,098.87
Pipe, sewer or waste: Damaged or failing		\$1,486.38
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>18.38%</b>	<b>\$13,061.90</b>
Branch Circuits: Beyond Expected Useful Life		\$4,211.13
Emergency Light: Missing or inadequate		\$905.00
Fixture, incandescent: Replace due to remodel		\$5,571.77
Main service: Beyond expected useful life		\$2,374.00
<b>19 FF&amp;E</b>	<b>7.03%</b>	<b>\$5,000.00</b>
Hard and soft goods: Beyond expected useful life		\$5,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$71,074.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$390.91
Force Protection	9.00%	\$7,071.51
General Conditions	10.00%	\$7,107.40
<b>Total Additional Hard Cost</b>		<b>\$14,569.81</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$8,564.38
SIOH Conus	6.50%	\$6,123.53
Design	10.00%	\$8,564.38

Building 12347

08 MYr Inflation Fct	9.93%	\$10,813.38
<b>Total Soft Cost</b>		<b>\$34,065.68</b>
<b>Total Project</b>		<b>\$119,709.49</b>

## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.20%</b>	<b>\$4,334.40</b>
Site Earthwork		\$4,334.40
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.11%</b>	<b>\$5,572.18</b>
Roof Coverings		\$5,572.18
<b>08 Doors &amp; Windows</b>	<b>5.50%</b>	<b>\$7,452.00</b>
Interior Doors		\$7,452.00
<b>09 Finishes</b>	<b>33.40%</b>	<b>\$45,231.08</b>
Ceiling Finishes		\$8,249.85
Floor Finishes		\$10,527.04
Partitions		\$10,099.15
Wall Finishes		\$16,355.04
<b>10 Specialties</b>	<b>0.17%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>7.75%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>5.97%</b>	<b>\$8,084.86</b>
Communications & Security		\$3,639.53
Sprinklers		\$4,445.33
<b>15 Mechanical</b>	<b>20.39%</b>	<b>\$27,619.00</b>
Cooling Generating Systems		\$10,744.00
Domestic Water Dist		\$8,100.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.43%</b>	<b>\$11,415.50</b>
Electrical Service & Distribution		\$11,415.50
<b>19 FF&amp;E</b>	<b>11.07%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$135,441.67

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$744.93
Force Protection	9.00%	\$13,475.77
General Conditions	10.00%	\$13,544.17
<b>Total Additional Hard Cost</b>		<b>\$27,764.86</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$16,320.65
SIOH Conus	6.50%	\$11,669.27
Design	10.00%	\$16,320.65
08 MYr Inflation Fct	9.93%	\$20,606.45
<b>Total Soft Cost</b>		<b>\$64,917.02</b>

**Total Project Cost for Renovation** **\$228,123.55**

*Building 12347*

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.36%</b>	<b>\$6,847.25</b>
Site Earthwork		\$6,847.25
<b>03 Concrete</b>	<b>10.94%</b>	<b>\$22,278.50</b>
Floor Construction		\$10,066.25
Slab on Grade		\$5,087.25
Standard Foundations		\$7,125.00
<b>04 Masonry</b>	<b>12.52%</b>	<b>\$25,495.54</b>
Exterior Walls		\$25,495.54
<b>07 Thermal &amp; Moisture Protection</b>	<b>10.35%</b>	<b>\$21,077.71</b>
Roof Construction		\$2,942.02
Roof Coverings		\$18,135.69
<b>08 Doors &amp; Windows</b>	<b>12.43%</b>	<b>\$25,303.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,968.00
<b>09 Finishes</b>	<b>15.86%</b>	<b>\$32,298.49</b>
Ceiling Finishes		\$4,174.38
Floor Finishes		\$10,028.30
Partitions		\$10,710.78
Wall Finishes		\$7,385.04
<b>11 Equipment</b>	<b>5.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.58%</b>	<b>\$7,281.75</b>
Communications & Security		\$2,565.00
Sprinklers		\$4,716.75
<b>15 Mechanical</b>	<b>12.56%</b>	<b>\$25,575.00</b>
Cooling Generating Systems		\$11,400.00
Domestic Water Dist		\$5,400.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.87%</b>	<b>\$11,960.00</b>
Electrical Service & Distribution		\$11,960.00
<b>19 FF&amp;E</b>	<b>7.37%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$203,617.23

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,119.89
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$20,361.72
<b>Total Additional Hard Cost</b>		<b>\$21,481.62</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$11,254.94
SIOH Conus	6.50%	\$15,363.00
Design	10.00%	\$22,509.89
08 MYr Inflation Fct	9.93%	\$27,230.71
<b>Total Soft Cost</b>		<b>\$76,358.53</b>
<b>Total Project Cost for Replacement</b>		<b>\$301,457.38</b>

**INSERT BUILDING 12347 FLOOR PLANS HERE**





200 Goddard  
Front View  
white Sands Missile Range, NM

### Building 12348

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Building 12348, constructed in 1958, is a one family suite structure. This unit contains a full kitchen, dining area, living room, bathroom and three bedrooms. Although renovated in 2002, this facility does not meet Lodging standards and cannot be reconfigured without significant reconstruction. To renovate Building 12348 to the new standards and configuration would exceed 50% of the replacement cost.

Our recommendation is to remove building 12348 from the Lodging inventory, allowing the installation to determine an alternate use for this facility. This facility will be removed from the White Sands Missile Range Wellness Solution and Lodging Master Plan.

### Significant Assumptions

- The replacement and renovation cost models are based on 0 standard stay rooms, 1 extended stay rooms and 2 family suites.
- The renovation plan uses the existing building foot print with the plan reworked to meet current lodging size requirements.
- The replacement and renovation cost models include any public or back-of-the-house spaces as outlined in the Areas and Occupancies Schedule Template included in the Appendix.
- All costs are adjusted by the Area Cost Factor of 100% for White Sands Missile Range, NM.

### Cost Analysis

• Renovation Cost	\$216,700
• Replacement Cost	\$281,201
• Renovation to Replacement Cost Ratio	77.06%

Because the Renovation to Replacement Cost Ratio is greater than 50.00%, renovation of Building 12348 is not recommended.



200 Goddard  
Backyard View  
White Sands Missile Range, NM

## Attributes

01.Number of Units Constructed	1
02.Number of Units Used	1
03.Main Lodging Facility	No
04.Single Room w/o FullKitchen	0
05.Single Room w/ Full Kitchen	0
06.Multi Room wo/ Full Kitchen	0
07.Multi Room w/ Full Kitchen	0
08.DVQ wo/ Full Kitchen	0
09.DVQ w/ Full Kitchen	1
10.Operating as Standard Room	0
11.Operating as Extended Stay	0
12.Operating as Family Suite	1
13.Renovated to Standard	0
14.Renovated to Extended Stay	1
15.Renovated to Family Suite	2
16.Delta renovation	2
17.Remove from Inventory	Yes
18.Upgrade Renv Cost Model Req	No
19.Renv Cost Model Req	Yes



200 Goddard  
Living Room  
White Sands Missile range, NM

## Condition Analysis/Recommendation

### FF&E

#### FF&E Allowance

- Analysis: The hard and soft goods are typical of residential furnishings. The guest bedrooms have a bed with headboard, night stand, dresser and easy chair. The living/dining area has a sofa, coffee table, easy chair, side table, TV with cabinet, dining room table and chairs. Most of the hard and soft good were replaced in the 2002 renovation.

- Recommendation: No corrective action required.

### Foundations

#### Standard Foundations

- Analysis: Foundations consist of wall bearing continuous footings. No clear failures or significant differential settlement can be seen from the exterior. Foundation is in good condition.

- Recommendation: No corrective action required.

#### Slab on Grade

- Analysis: The floor is concrete slab on grade and is in good condition.

- Recommendation: No corrective action required.

### Superstructure

#### Floor Construction

- Analysis: The floor construction is slab on grade, single story building.

- Recommendation: No corrective action required.

#### Roof Construction

- Analysis: The roof structure is a flat wood framing and plywood deck on load bearing masonry.

- Recommendation: No corrective action required.

### Exterior Enclosure

#### Exterior Walls

- Analysis: The exterior wall construction is load bearing concrete masonry units with stucco and paint. Building has been repainted and is in fair to good condition.

- Recommendation: No corrective action required.

#### Exterior Windows

- Analysis: The windows are thermal glazed aluminum frame with white powder coat finish, of the latest major renovation, are in good condition.

- Recommendation: No corrective action required.



**200 Goddard  
Kitchen  
White Sands Missile Range, NM**

### **Exterior Doors**

- Analysis: The exterior doors are solid core wood flush in wood frames of the latest major renovation. The front door has an aluminum frame, glass and screen storm door. The doors are in good condition.
- Recommendation: No corrective action required.

### **Roofing**

#### **Roof Coverings**

- Analysis: The roof covering is a built-up system with gravel ballast without gutters and downspouts. There are metal gravel stops and fascia. The roof is in fair condition but is estimated to be at the end of its expected useful life.
- Recommendation: Replace built-up roof system.

### **Interior Construction**

#### **Partitions**

- Analysis: The interior partitions are drywall over wood studs and are in good condition.
- Recommendation: No corrective action required.

#### **Interior Doors**

- Analysis: Hollow core wood doors in wood frames. All the interior doors are in fair condition but do not meet Army Lodging Standards.
- Recommendation: Replace hollow core doors with solid core and install new hardware.

### **Interior Finishes**

#### **Wall Finishes**

- Analysis: Wall finish in guest rooms is primarily paint, renewed at the latest major renovation and in good condition. Baths are paint finish with 4x4 ceramic tile at the tub.
- Recommendation: Install vinyl wall covering in the guest rooms.

#### **Floor Finishes**

- Analysis: The floor finishes are carpet in the guest rooms and corridor, ceramic tile in the baths and kitchen; renewed at the latest renovation. All are in good condition.
- Recommendation: Replace the carpet in the guest rooms and corridors.

#### **Ceiling Finishes**

- Analysis: Ceilings are painted drywall of the latest renovation and in good condition.
- Recommendation: Paint interior ceilings.

## **Plumbing**

### **Plumbing Fixtures**

- Analysis: The guest room bath plumbing fixtures consist of counter mounted china lavatories, porcelain steel tubs and floor mounted tank type water closets. The plumbing fixtures are of the latest renovation and are in good condition.
- Recommendation: Replace plumbing fixtures in concert with building remodel and piping replacement.

### **Domestic Water Distribution**

- Analysis: The domestic water piping is copper most of which is building original and in fair condition. Hot water is supplied from a gas fired water heater of the latest renovation and in good condition.
- Recommendation: Replace domestic water distribution system.

## **HVAC**

### **Cooling Generating Systems**

- Analysis: The HVAC system is two systems with separate controls ducted into a common supply plenum over the hallway. The heating system is a gas fired furnace, of the latest renovation and in good condition. The air conditioning is via a rooftop package unit, also in good condition, ducted through the roof. Each system has its own thermostat and there is a manual damper to separate the supply of the two systems into the supply plenum. There is a locking plastic cover over the non-seasonal thermostat. It is necessary for the staff personnel to manually shift the damper and thermostat cover in season. There is no supply air to the kitchen.
- Recommendation: Replace the HVAC system with a combined heating/cooling system with unit control.

## **Fire Protection**

### **Sprinklers**

- Analysis: No sprinklers exist in this house.
- Recommendation: Install fire sprinkler system.

## **Electrical**

### **Electrical Service/Distribution**

- Analysis: The building electrical service is fed from an overhead utility transformer, serving more than one building, supplying 120/240 volt, single phase service to an interior main breaker load center. Branch wiring is type NM sheathed cable of original construction, in fair condition. Lighting is primarily residential type lamps, paddle fan fixtures and wall sconces. Wiring devices and lighting are of the latest renovation, in good condition. There is no emergency egress lighting.
- Recommendation: Replace electrical distribution, branch circuits, lighting and wiring devices in concert with building renovation. Add emergency egress lighting.

### **Communications and Security**

- Analysis: The fire alarm is local smoke detector/horn combination only, in good condition.
- Recommendation: Install NFPA 72 code approved fire alarm system.

### **Equipment**

#### **Other Equipment**

- Analysis: Other equipment consists of a complete kitchen with all modern appliances. The guest laundry has a residential washer and dryer. All appliances are in good condition.
- Recommendation: No corrective action required.

### **Site Preparation**

#### **Site Earthwork**

- Analysis: The site consists of concrete sidewalks, porch and driveway with gravel, stone, grass and shrubbery landscaping, well maintained and in good condition. There are no signs of ponding or erosion.
- Recommendation: No corrective action required.



200 Goddard  
Hallway  
White Sands Missile Range, NM

### **Major Functional Criteria**

#### **CFSC Lodging Standards**

The following are existing conditions of the Functional Criteria of the building. Included is a statement of the condition and an appropriate recommendation for each area that does not meet CFSC Lodging Standards.

##### **Back of the House Spaces**

- **Dirty / Clean Linen Storage**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Housekeeping Rooms**  
Does not exist, is required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Guest Rooms**

- **Family Suites**  
This facility is a 3 bedroom house, approximately 1,350 s.f. It has a full kitchen and a one car garage. This facility does not meet Army Lodging standards. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

##### **Public Spaces**

- **Bell Cart Station**  
Does not exist, is required based on Functional Criteria. Renovation not required; facility will be replaced as part of the Wellness Recommendation.

- **Guest Laundry Area**  
Meets majority of Functional Criteria.  
Renovation not required.
- **Vestibule**  
Exists, is not required based on Functional Criteria.  
Renovation not required; facility will be replaced as part of the Wellness Recommendation.

#### **Site**

- **Community Planning**  
The existing Lodging building is located within a well defined campus area but is not close to community facilities. The architecture of the Lodging campus is compatible with local installation architectural guidance. Exterior building architecture and material selections blend with the surrounding community and facilities and is in context with regional influences.
- **Force Protection**  
The existing Lodging building siting does not consider force protection setback constraints.  
Renovation not considered; existing Lodging facility will be replaced as part of the Wellness Recommendation.
- **Site Amenities**  
The exterior common areas do not meet Lodging standards. Required exterior common areas and site amenities do not exist. Landscape and site work is in fair condition.

## Condition Assessment/Renovation/Replacement Analysis

### Condition Assessments

The Condition Assessment Cost lists what is required to make the building well as it is currently functioning. The cost includes all deficient items based on our field observation and using the Army Lodging standard Cap Ex replacement schedule.

#### Summary of Project Cost

CSI	Percent	Amount
<b>07 Thermal &amp; Moisture Protection</b>	<b>8.78%</b>	<b>\$5,319.37</b>
Built-up Roof: Beyond Useful Life		\$5,319.37
<b>08 Doors &amp; Windows</b>	<b>16.94%</b>	<b>\$10,264.80</b>
Wood Door - Beyond Useful Life		\$10,264.80
<b>09 Finishes</b>	<b>15.33%</b>	<b>\$9,293.32</b>
Carpet: Beyond Useful Life		\$2,984.82
Interior ceilings: Paint Failing		\$796.50
Vinyl walcovering, missing or inadequate		\$5,512.00
<b>13 Special Construction</b>	<b>10.72%</b>	<b>\$6,495.75</b>
Fire Alarm System: Missing or Inadequate		\$1,147.50
Fire Sprinklers: Missing or Inadequate		\$5,348.25
<b>15 Mechanical</b>	<b>35.85%</b>	<b>\$21,727.34</b>
Bath tub: Replace due to remodel		\$3,169.40
Pipe, domestic water: Damaged or failing		\$3,119.26
Pipe, sewer or waste: Damaged or failing		\$1,493.58
Sink & vanity: Replace due to remodel		\$1,545.40
Sink, kitchen: Beyond expected useful life		\$823.50
Split system: Missing or inadequate		\$9,594.40
Water closet: Replace due to remodel		\$1,981.80
<b>16 Electrical</b>	<b>12.39%</b>	<b>\$7,511.33</b>
Branch Circuits: Beyond Expected Useful Life		\$4,232.33
Emergency Light: Missing or inadequate		\$905.00
Main service: Beyond expected useful life		\$2,374.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$60,612.00</b>

#### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$333.37
Force Protection	9.00%	\$6,030.59
General Conditions	10.00%	\$6,061.20
<b>Total Additional Hard Cost</b>		<b>\$12,425.16</b>

#### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$7,303.72
SIOH Conus	6.50%	\$5,222.16
Design	10.00%	\$7,303.72
08 MYr Inflation Fct	9.93%	\$9,221.67
<b>Total Soft Cost</b>		<b>\$29,051.26</b>

**Total Project** **\$102,088.41**

Building 12348



## Renovation

The Renovation Cost is based on making changes to the building to meet the Army Lodging Standard Functional Criteria. This cost also includes all building deficiencies listed under the Condition Assessment Cost.

### Summary of Project Renovation Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>2.89%</b>	<b>\$3,712.80</b>
Site Earthwork		\$3,712.80
<b>07 Thermal &amp; Moisture Protection</b>	<b>4.35%</b>	<b>\$5,595.42</b>
Roof Coverings		\$5,595.42
<b>08 Doors &amp; Windows</b>	<b>5.47%</b>	<b>\$7,038.00</b>
Interior Doors		\$7,038.00
<b>09 Finishes</b>	<b>31.25%</b>	<b>\$40,203.27</b>
Ceiling Finishes		\$7,333.20
Floor Finishes		\$10,080.05
Partitions		\$8,650.82
Wall Finishes		\$14,139.20
<b>10 Specialties</b>	<b>0.18%</b>	<b>\$232.65</b>
Fittings		\$232.65
<b>11 Equipment</b>	<b>8.16%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>6.32%</b>	<b>\$8,127.00</b>
Communications & Security		\$3,658.50
Sprinklers		\$4,468.50
<b>15 Mechanical</b>	<b>20.81%</b>	<b>\$26,775.00</b>
Cooling Generating Systems		\$10,800.00
Domestic Water Dist		\$7,200.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>8.92%</b>	<b>\$11,475.00</b>
Electrical Service & Distribution		\$11,475.00
<b>19 FF&amp;E</b>	<b>11.66%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
Total Raw Cost	100.00%	\$128,659.14

### Additional Hard Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Spirit	0.50%	\$707.63
Force Protection	9.00%	\$12,800.94
General Conditions	10.00%	\$12,865.91
<b>Total Additional Hard Cost</b>		<b>\$26,374.48</b>

### Soft Cost (Template: Army Lodging Renovation)

Parameter Name	Percent	Amount
Contingency	10.00%	\$15,503.36
SIOH Conus	6.50%	\$11,084.90
Design	10.00%	\$15,503.36
08 MYr Inflation Fct	9.93%	\$19,574.54
<b>Total Soft Cost</b>		<b>\$61,666.17</b>

**Total Project Cost for Renovation** **\$216,699.79**

Building 12348

## Replacement

The Replacement Cost is the cost to rebuild the units as part of a new facility including the appropriate back-of-house and public spaces. This cost is based on number and types of units in the renovation model.

### Summary of Project Replacement Cost

CSI	Percent	Amount
<b>02 Site Work</b>	<b>3.21%</b>	<b>\$6,106.25</b>
Site Earthwork		\$6,106.25
<b>03 Concrete</b>	<b>10.91%</b>	<b>\$20,715.38</b>
Floor Construction		\$9,840.05
Slab on Grade		\$4,530.33
Standard Foundations		\$6,345.00
<b>04 Masonry</b>	<b>12.68%</b>	<b>\$24,085.45</b>
Exterior Walls		\$24,085.45
<b>07 Thermal &amp; Moisture Protection</b>	<b>9.88%</b>	<b>\$18,756.97</b>
Roof Construction		\$2,544.19
Roof Coverings		\$16,212.78
<b>08 Doors &amp; Windows</b>	<b>13.10%</b>	<b>\$24,889.00</b>
Exterior Doors		\$4,335.00
Exterior Windows		\$16,000.00
Interior Doors		\$4,554.00
<b>09 Finishes</b>	<b>15.16%</b>	<b>\$28,802.66</b>
Ceiling Finishes		\$3,714.60
Floor Finishes		\$9,636.41
Partitions		\$9,262.45
Wall Finishes		\$6,189.20
<b>11 Equipment</b>	<b>5.53%</b>	<b>\$10,500.00</b>
Other Equipment		\$10,500.00
<b>13 Special Construction</b>	<b>3.41%</b>	<b>\$6,484.59</b>
Communications & Security		\$2,284.20
Sprinklers		\$4,200.39
<b>15 Mechanical</b>	<b>12.49%</b>	<b>\$23,727.00</b>
Cooling Generating Systems		\$10,152.00
Domestic Water Dist		\$4,800.00
Plumbing Fixtures		\$8,775.00
<b>16 Electrical</b>	<b>5.72%</b>	<b>\$10,868.00</b>
Electrical Service & Distribution		\$10,868.00
<b>19 FF&amp;E</b>	<b>7.90%</b>	<b>\$15,000.00</b>
Interior FF&E allowance		\$15,000.00
<b>Total Raw Cost</b>	<b>100.00%</b>	<b>\$189,935.30</b>

### Additional Hard Cost (Template: Army Lodging New Construction)

Parameter Name	Percent	Amount
Spirit	0.50%	\$1,044.64
Force Protection	0.00%	\$0.00
General Cond	10.00%	\$18,993.53
<b>Total Additional Hard Cost</b>		<b>\$20,038.17</b>

**Soft Cost (Template: Army Lodging New Construction)**

<b>Parameter Name</b>	<b>Percent</b>	<b>Amount</b>
Contingency	5.00%	\$10,498.67
SIOH Conus	6.50%	\$14,330.69
Design	10.00%	\$20,997.35
08 MYr Inflation Fct	9.93%	\$25,400.96
<b>Total Soft Cost</b>		<b>\$71,227.67</b>
<b>Total Project Cost for Replacement</b>		<b>\$281,201.15</b>

**INSERT BUILDING 12348 FLOOR PLANS HERE**

# Army Lodging Wellness Recommendation

## Appendix

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Public Areas</b>											
Exterior Entrance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Vestibule	100	100	150	150	200	200	200	200	200		In Main Lodging facilities square footage included in Lobby
Lobby (includes vestibule at Main Lodging facilities)	300-500	300-500	500-800	500-800	800-1000	800-1000	1,000-1,200	1,000-1,200	1,200-1,500	X	Includes square footage of vestibule at Main Lodging facilities
Front Desk	2 station / 100 s.f.	2 station / 100 s.f.	2 station / 100 s.f.	3 station / 150 s.f.	3 station / 150 s.f.	3 station / 250 s.f.	3 station / 250 s.f.	4 station / 300 s.f.	4 station / 300 s.f.	X	
Bell Cart Station	2 carts / 24 s.f.	2 carts / 24 s.f.	3 carts / 36 s.f.	3 carts / 36 s.f.	4 carts / 48 s.f.	4 carts / 48 s.f.	6 carts / 72 s.f.	6 carts / 72 s.f.	8 carts / 96 s.f.		Not required at facilities w/out interior corridors if building is retained.
Breakfast Bar (Seat/Svc)	550	550	550	550	550	550	550	750	1,000	X	Needed at secondary facility, if it is a remote location. CFSC requirement min 550
Passenger Elevators			1 @ 64 s.f. 50-99 rooms 2 @ 64 s.f. 100-149 rooms	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each	2 @ 64 s.f. each 400-499 rooms 3 @ 64 s.f. 500-599 rooms	3 @ 64 s.f. each	3 @ 64 s.f. each		If building is over two stories high
Stairs	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each	Numer of stairs based on plan @ 230 s.f. each		
Public Corridors	**	**	**	**	**	**	**	**	**		Minimum 6' wide
Public Telephone Area	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	2 phones / 12 s.f.	3 phones / 18 s.f.	3 phones / 18 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.	4 phones / 24 s.f.		House phone in secondary buildings. Pay phones & house phones at Main facility
Vending - Full Service	1 per building / 70 s.f.	1 per building / 70 s.f.	70	70	70-105	105-140	140-210	210-280	280+		1 for every other floor to support up to 200 units / 70 s.f. each
Vending - Ice Only	1 per building / 30 s.f.	1 per building / 30 s.f.	30	30	30-45	45-60	60-90	90-120	120+		1 for every other floor to support up to 200 units / 30 s.f. each
Women - Lobby	100	100	200	200	260	260	315	315	350	X	
Men - Lobby	100	100	200	200	260	260	315	315	350	X	
Multi-Purpose Rm	250	250	250	250	250	250	250	250	250	X	
Study Rooms	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 per 25 extended stay units of 250 s.f. each at posts with schools facilities
Guest Laundries	192	192	192-384	384-576	576-768	768-1152	1152-1536	1536-2112	2112+		CFSC requirement 2w/d for every 75 guest rooms
Gear Wash Rooms	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each	At entrance / 170 s.f. each		Only at facilities with outdoor training
Guest Bulk Storage	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note	See Note		1 unit for every 4 family suites of 25 ea. 40 w/circ.
<b>Guest Rooms</b>											
Guest Room - Standard	300	300	300	300	300	300	300	300			
Guest Room - Ext. Stay	300	300	300	300	300	300	300	300			
Guest Room - Suites	450	450	450	450	450	450	450	450			

ROOM / SPACE	1-10 Units	11-49 Units	50-149 Units	150-199 Units	200-299 Units	300-399 Units	400-599 Units	600-799 Units	800+	At Main Facility on Post Only	Note
<b>Back-of-House Areas</b>											
Manager's Office	180	180	180	180	180	180	180	180	180	X	
Assist. Mgr. Off.	-	-	0 50-99 units 120 100-149 units	120	120	120	120	120	120	X	
Front Office Mgr.	100	100	100	100	100	100	100	100	100	X	
Admin. Offices	2 space / 200-250 s.f.	2 space / 200-250 s.f.	2 spaces / 200-250 s.f.	2 spaces / 200-250 s.f.	5 spaces / 500-600 s.f.	5 spaces / 500-600 s.f.	7 spaces / 800-900 s.f.	7 spaces / 800-900 s.f.	10 spaces / 1,100-1,200 s.f.	X	
Cash Room	50	50	75	75	100	100	125	125	150	X	
Luggage Storage	-	-	75	75	100	100	100	100	100	X	
Admin. Conf. Rm.	250	250	250	250	350	350	350	350	350	X	
Housekeeping Off.	120	120	120	120	120	120	120	120	120	X	
Dirty/Clean Linen Stor.	50	50	50	50	100	100	200	200	400	See Note	At all facilities w/out in-house laundry
In-House Laundry	500	500	500	500	500	500	750	750	900	X	CFSC requirement min 500 s.f
Receiving Office	75	75	75	75	75	75	75	75	75	X	
Maintenance Area	100	100	175	175	250	250	400	400	600	X	
Kitchen Prep Room	150	150	150	150	150	150	150	150	150	X	facility, if it is a remote location.
Break Room		140	210	210	280	280	350	350	420		
Staff Toilet - Men			200	100	100	100	150	150	200		
Staff Toilet - Women		100	100	100	150	150	200	200	250		
Access Corridor	**	**	**	**	**	**	**	**	**		
Receiving	150	150	150	150	150	150	150	150	200	X	
Housekeep. Rms.	128	128-512	512-1280	1280-1792	1792-2560	2560-3456	3456-5120	5120-6912	6912+		128 s.f. for each 15 guest rooms
Service Elevator	80	80	80	80	80	80	80	80	80		
Data/Commo Rm.	100	100	100	100	150	150	150	150	150		
Switch Closets	16 *	16 *	16-48 *	48-64 *	64-96 *	96-128 *	128-144 *	144-256 *	256+ *		1 closet of 16 s.f. for approximately 50 guest rooms
Janitor Closet	50	50	50	50	50	50	50	50	50	X	Only at first floor of Main Lodging facility.
Mechanical Room	*	*	*	*	*	*	*	*	*		
General Stor. Rm.	500	500	500	500	500	500	500	500	500	X	
Bulk Storage Rm.	500	500	500	500	500	500	500	500	500	X	
Electrical Room	140 *	140 *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *	1 per floor @ 140 s.f. each *		One electrical room to serve no more than 100 rooms.
Elevator Equip.Rm.	84	84	84	84	84	84	84	84	84		
<b>EXTERIOR</b>											
Playground (Outdoor)										X	Play ground required at facilities with family stays.
Grounds Maintenance	400	400	400	400	400	400	400	400	400	X	

\* Mechanical/electrical/equipment Spaces to be determined by contractor based on appropriate code and recommended systems.

\*\* Corridors to be determined based on building layout.